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PRESENT-DAY SOCIAL PROBLEMS OF THE AMERICAN FAMILY[1]

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By home economists family life and community life are presumably accepted as basic units of civilized relationship. It should be equally understood that both family and community are none the less basic because constantly changing, both within themselves and in relation to each other. The more slowly changing relations we may call permanent or structural, and the more rapid changes we may call temporary or functional; but the fact of change cannot be blinked. Changed relations between human beings are forced by physiographic changes and by inventions and discoveries. These call for further changes or for readjustments to prevent further change. Hence, problems.

A social problem is any situation which does not solve itself. It does not contain within itself the elements of its own solution. A true solution harmonizes all the interests involved. A problem remains so long as the situation refuses to resolve itself without the intrusion of some element previously external to the situation, or the extrusion of some element previously entangled in the situation.

In what situations do American families find themselves which do not resolve themselves harmoniously? It would be easy to list the statistics of family dismemberment, through widowhood, orphanage, desertion, divorce, custodial segregation. But these are not all. Some family patterns—the unmarried parents, the childless, the homeless—never had been completed at all. These, too, are problems of the family. And, even with a normal family pattern, if a home's morale is disorganized or its standards are deficient, it may be just as truly a "broken

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home" as if the family were dismembered. Demoralized families include, of course, some that are also dismembered—the desertions, the divorces, the illegitimacies, the imprisonments. Such problems are indeed more tragic and difficult than those of mere dismemberment.

Family disintegration, however, is merely an end result, a precipitate from a muddy mixture that is not a solution. Most families at any given time are "muddling through" without landing in the domestic relations courts. Some work out their own salvation, or there are available to them private, non-philanthropic resources of aid, comfort, and counsel. Others are in a state of chronic mild maladjustment that always stops short of acute or complete demoralization because their standards, their status, or their intelligence repeatedly rescues the situation. Anyone who has ever lived the life of a real neighborhood knows that an apparently normal social-economic and home-economic status often more or less conceals a situation which is just as much a social-case-work problem as any that ever called for the services of a charity visitor or a probation officer. No arbitrary line can be drawn between these uncounted problems which give "human interest" selling-power to the movies, the "comics," and the fictioneers, and those extreme cases which get into the hands of social agencies.

The beginnings of family problems are to be found in some shortcoming either in the preconditions of family integrity or in the plane of living after the family is established. These elements in the basis of normal family life may be outlined as follows:

I. Community organization in support of family integrity and of a normal standard of living
II. The preconditions of family integrity
    1. Sound heredity (the biological basis)
    2. Personal character (the ethical basis)
    3. Family pattern (marriage, children, living together)
    4. Adequate income (the economics basis)
III. The elements of normal plane of living
    1. Safety (moral, civic, personal, and property)
    2. Shelter
    3. Health (nutrition, warmth, hygiene)
    4. Employment
    5. Education
    6. Recreation
    7. Spiritual and esthetic expression

In modern urban civilization, families are dependent for these essential upon the proper functioning of a multitude of socially-organized services, public or private. The family which uses its wealth to isolate itself from the life and needs and services of the community is also a social problem. Whether or not the shortcomings be shortcomings of the family or of these community agencies, the fact remains that the community's resources are coming short of reaching the family's needs, or there would be no problem. There is joint accountability, and the question of "blame" is futile. Furthermore, if we expect so to influence families as to render them resourceful in seeking and using community resources for the solution of their problems, that, too, must be accomplished through socially-organized effort on the part of us who are community-minded. Indeed, many family problems are recognized as such only by the community: they consist in part in the lack of recognition on the part of families that their integrity or standards are threatened.

An interesting problem, for "control" purposes in family research, is why and how certain families manage to maintain a degree of normality, despite shortcomings in the basis of family life which seem fatal to other families. We need as many case studies of so-called normal families as we have of the so-called abnormal, and no one is in better position to help us get them than the home economists.

A useful basis for our analysis will be to list rapidly some widespread shortcomings to be found in each precondition of family integrity and in certain elements in living standards.

Heredity. Heredity is the biological basis of the family. It is the unlearned capacity to respond to stimuli. We know these capacities only through actual responses, but actual responses by no means indicate the full scope of anyone's capacities. To consider heredity as a predestination of the event is only one of the manifold errors of the popular biological evangelists of the present day. The so-called shortcomings in heredity may be equally shortcomings in our knowledges, skills, and resources for eliciting some normal responses which would otherwise be possible. Practically speaking, however, there are certain families which present differences which we recognize as social problems, because of differences in heredity—that is, a heredity which apparently cannot, like that of other families, respond in a normal way to any stimuli we as yet have available for them. Such are certain major physical defects which tend to produce deaf-mutism or deformity; feeblemindedness; nervous instability. Such handicaps to family integrity are apparently "hereditary." Tuberculosis, venereal disease,

cancer, congenital accidents, insanity, and criminality are, on the other hand, no longer considered strictly hereditary. Even feeblemindedness, a lack of internal resources, is an economic rather than a biological judgment.

Character. Character represents the ethical basis of family life. Character is a person's organization of habitual attitudes toward social situations. It is a resultant of heredity and of the family and community conditions of the previous generation, as well as of the present. But as a precondition to family success it ranks high. And it must be admitted that some of the virtues which especially fit for family solidarity and morale are nowadays undermined: for example, responsibility, faithfulness, honesty. Still more fundamentally, the attitudes toward virtue in general, toward self-control, toward the conventional rôles in family life, and toward the family itself are all under fire. When a boy, admonished against immorality and appealed to on grounds of his future family, tells you he never intends to marry, or that he wouldn't marry a girl who hadn't had previous "experience" or who objected to his own previous escapades or who cared for children—what does one answer? From far less extreme attitudes comes many a demoralized home.

This disrespect for virtue is, after all, more fundamentally a questioning of authority. People like authority, but what authority? They do not like it unless they trust it. They like the authority of worship or the authority of fact, not the authority of compulsion or of status. As they have reacted against the canons of religion or of taste, arbitrarily imposed, so they have rebelled against the mores of the family when enforced as a code. This is little evidence of independence of thought, but much of a wholesome independence of attitude.

The home should, of course, be its own best trainer of character for parenthood and family life. But its problems of morale as just set forth are evidence that help must come from outside sources, if this essential function is to be conserved.

In industry, mechanization has economized the non-human materials and energies, and the twentieth century is beginning to tackle the conservation of the human resources. Is there a similar problem in the family, where the household tends to be mechanized, without corresponding conservation and efficiency of spiritual resources?

The heart of the family is morale. Let me suggest just a few more problems of family morale and attitudes:

Does the modern man choose a mate as mother or as companion or both?

Does the modern girl and wife feel obliged in figure and fashion to approximate a sterile type, in order to compete successfully for the opportunity to be a mother?

Medical science has never even attempted to delay physical maturity. The sex drive and romance come sooner than cultural maturity. Does comradeship in marriage grow more difficult, rarer but richer, with the distractions and complexity of city life, the freedom and culture of women, and the higher individualism at the late age of marriage?

Is modern city life making intersex acquaintance too easy or too difficult for successful choices and mutual adjustment?

Will the answers to these questions argue for the companionate preceding the family?

Has sex sophistication become a pose of the ignorant and the imitative?

How can marriage and child-bearing be made attractive to the bachelor man and girl? Should they?

How far are families "passing the buck" to schools and other agencies for the rearing of sound citizens?

Should modern parents seek to maintain their children's respect through the authority of inherent merit, or is "adulthood" for the child best secured by becoming disillusioned and spiritually weaned as early as possible?

What are the actual effects of the broadcasting of stuff like Judge Lindsay's?

What effects, if any, does the hospital care and easy adoption of unwanted babies have upon family morale?

Have family morals depended too much upon fear of the disappearing external sanctions of hell, disease, pregnancy, disgrace?

Would a single standard of morals force us in practice to accept what seems a lowering of women's standards as well as a raising of men's? Should society attempt an identical standard for both men and women and for all ages?

Should free selective unions be treated with the same attitudes as promiscuous prostitution?

If so, should we attempt to retain the risks of hell, disgrace, pregnancy, and disease, in order to prevent people from incurring them?

What are the tests of immorality and morality in relation to the family?

Will the future of the family be determined more by morals or by standards of taste?

Is the absence of religion as a consolation or compensation for the disappointments of marriage more important even than the absence of religion as a sanction for proper conduct?

How can a conscientious couple attempt to live up to all that the world expects from them nowadays as spouses, householders, parents, producers, and citizens, without declaring moral bankruptcy?

Family Pattern. Family pattern is the legal-social basis of family integrity. In any given civilization, the accepted or tolerated family pattern is a guarantee of recognized status, which is psychologically essential to a sense of security and self-respect in the family's members. Conformity to custom is thus of great symbolic importance, though the particular form insisted upon by custom may change. A surprising number of family patterns have proved themselves of adaptive value and have been sanctioned by group standards under different circumstances. The problems of marriage and family pattern are therefore largely problems of what degrees and kinds of experimental variation from the approved type are or should be tolerated. Overcrowding and nomadism are generally considered abnormal. Child marriage, accepted in India, is a small but acute problem in the United States.

Are cooperative housekeeping, marriage under two roofs, and the companionate, pathological or progressive variations?

Ought marriage to trim its sails to standards of living, or should we insist that the plane of living be reduced as each new child arrives, or shall each child have in his own right a claim upon the community surplus?

Should different norms for marriage be set up for persons of low intelligence? Can they be taught birth control or should they be sterilized?

Income. At this point the problems of family pattern obviously blend with those of income, the economic basis of the family, and this we leave for discussions by others.

Housing. Of the seven elements in standards of normal living, housing, health, and recreation seem most appropriate to mention in this discussion. The housing shortage is not so acute as in the post-war period, but this is probably due in part to an actual change of standards on the part of many who previously had separate homes, or on the part of the community. While housing is largely governed by economic conditions, its social problems involve moral hazards, health hazards, and aesthetic standards, not to mention the possible breakdowns of morale and family pattern. Can family affections be conditioned to respond to a cooperative apartment as they used to be "attached" to a house and yard? Can they be nucleated about a series of radiators instead of a hearth? Can neighborhood loyalty and behavior-controls be expected from properly designed and operated multiple-housing projects such as those launched by the Institute of Land Economics at Northwestern University? Do the slum, the lodging house area, and other disorganized areas afford the same sort of so-called protection to

the so-called residence districts that so-called segregated districts provided to normal homes? Has housing, in its aesthetic aspects, any demonstrable relation to mental hygiene? Which is most effective: slum clearance, visiting housekeeping, model housing legislation, or industrial suburbs? These are some of the problems raised by the housing of modern urban life and community planning. We have not yet learned the social costs of living-in-cities.

Health. In "American Medicine and the People's Health," Dr. Moore[2] is showing us how far short we are from so organizing medical resources as to support adequately this sector of the standard of living. Despite the work of visiting nurses and free clinics, ill health is a dread or a blast to the standards and integrity of millions of families. Tuberculosis is par excellence a home disease. Venereal diseases wreak their havoc on the just and the unjust. Their control involves not only a medical problem but an economic and educational one, for in this problem there is a demand for the carriers as well as their supply to be checked. To check the supply and the wreckage of families caused by prostitution, we must check the demand. To control the demand we must educate for moral and aesthetic attitudes as well as for hygienic enlightenment. Other health problems of the modern family come closer to home economics. The over-born family, the under-cooked family, the tired-out family, and the bored-to-death family are all with us.

Recreation. American families tend to seek much amusement and little recreation. So-called recreation has been taken out of the home, depersonalized, and commercialized. Spectators have their games played for them by proxy. One pays professional singers, watches the "play" of "artists" who pretend to be enjoying themselves, passively indulges phantasy in the reel world, without personal participation. The home ceases to be associated with the "good times" and the memories of amateur performances and wild stunts and puppy romance which used to weave a web of affection about it. Eating and reading, even, are often done elsewhere.

The children's room, the attic, and even the yard may still be common in the towns of the land-grant colleges, but are becoming absolete in modern city life.

Even the marvels of the victrola, pianola, and radio have merely brought amusement back to the home, not recreation. The pressure of studies and of business leaves little time for companionship within the

[2] MOORE, HARRY H. American Medicine and the People's Health. New York: D. Appleton and Company, 1927.

family. In bed-room suburbs, father becomes, to the child, "that red-headed guy that hangs around here on Sunday."

With the radio in the apartment and the white-lights in the loop districts and the automobile between and beyond, neighborhood play, which creates neighborhood itself, tends to evaporate, and with these vanish neighborhood responsibilities and controls on conduct. Amusement commercialized caters to the irresponsible spenders and therefore tends to corrode the image of home life and distort the attitudes toward the home itself. Just where commercialized amusement ends and commercialized vice begins is a matter for the police-woman to decide. There is no question that in commercial "play" there is an ever-present social problem of the family.

Vicarious play and irresponsibility in the use of leisure have meant plenty of individualism, but far less individuality than comes from true recreation, which is creative and participant. It is crowd pleasure. Even dancing has become depersonalized; one takes a "skirt to dance with."

With the decay of supernatural sanctions and controls we find an anarchy of taste and morale, as both cause and effect. The impersonality of the movie and the rapid shifts of the vaudeville stage have subtly habituated the public to a toleration of sensual display. The demonstrated effects of licentiousness upon family life are sound ground for protest, but too often it is assumed that any disapproval of license in public entertainment is based upon morbid repressions and puritan codes.

The moving pictures seldom incite directly to wrong doing, but those whose lives have been crammed with their phantastic worlds and starved for actual experience will spontaneously react in movie patterns of behavior when confronted with situations to which their moving-picture world offers them the only ready-to-hand response.

Many efforts are under way for the maintenance of family integrity and standards, and "studies" of many kinds are frequently appearing. Many of these have inevitably been in behalf of special doctrines or interests or have been made by persons conscious only of the relation of the problem to one division of social or natural science.

What is needed is the assembling and sifting of existing factual material from all these sources and the painstaking accumulation of masses of case studies. All of the family problems boil down into the one great problem of family research. It is for this reason that Northwestern University, in its graduate work in sociology, hopes to develop a center for intensive and impartial family research.

Lee has pointed out that under present conditions, family integrity is, in some respects. threatened as seriously by tradition as by innovation. Both blind conservatism and blind experiment and revolt are dangerous here as everywhere. The question then, is can we find sanctions in facts and results to replace or include tradition? The basic approach in all our research must be practical. What things are sinister and why? This is not the cold-blooded research of the so-called pure sociologist, any more than it is the biased research of the sentimental fanatic. Beyond the collection of facts, must come careful thinking and analysis and a philosophy of life based upon them.

The object of this paper has been to raise and classify questions rather than to answer them. It is to be hoped that this group may see fit, in subsequent programs and studies, to devote special attention to one or other of the special problems indicated.

I have not here ventured to propose what should be the proper relation or service of home economics in the approach to present social problems of the American family. The relation is rather clear in the matter of income and in all matters which concern standards and planes of living. These are the very fields in which social economy has an equal interest and in which social economics and home economics have reciprocal value and responsibility in contributing to necessary research and hoped-for solutions.

THE LAKE PLACID CONFERENCES, 1899–1908

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To understand why the Lake Placid Conferences were organized we must have in mind that in the last decade of the nineteenth century there was a growing movement for the establishing of courses of study in schools and colleges on subjects relating to home economics. This was helped by such things as the literature which Mrs. Richards prepared, her "New England Kitchen," and her exhibit of a similar character called "Rumford Kitchen" at the Chicago Exposition in 1893. There were also Professor Atwater's investigations on human nutrition, which were in full operation at Wesleyan University from 1894 and were connected with the Office of Experiment Stations at Washington. Only four land-grant colleges (those in Iowa, Kansas, Oregon, and South Dakota) had departments of domestic science in 1890, but several others established them within the next ten years. The movement grew fast and many schools and a considerable number of colleges began to teach subjects in this field. Mrs. Richards and a few others therefore thought something ought to be done to straighten out the courses of study and the nomenclature of this subject, which were in a very chaotic condition.

It happened that in 1896 the movement had progressed far enough so that the regents of the University of the State of New York had admitted the subject of household science to their list of examinations.[1] The examinations were in charge of Melvil Dewey, who was secretary of the Board of Regents as well as state librarian. He became acquainted with Mrs. Richards, and at his suggestion they had a conference at Lake Placid with reference to these examinations. It was there that Mrs. Richards suggested that a conference on home economics be called. This was agreed to by Mr. and Mrs. Dewey, who were in charge of the club at Lake Placid, New York. The conference was called in the name of the trustees of the club and the announcement of the meeting said, "The time is ripe for some united action on the part of those most interested in home science or household economics." Eleven persons attended this conference, which was held at the Lake Placid Club in September, 1899: Mrs. Richards, who was made chairman; Miss Anna Barrows, editor of the *American Kitchen Magazine*, who was made secretary; Mr.

[1] See JOURNAL OF HOME ECONOMICS, volume 18, pages 703–706, December, 1926.

and Mrs. Dewey; Miss L. A. Nicholas of the Framingham (Massachusetts) Normal School; Mrs. Alice P. Norton, then supervisor of domestic science in the schools of Brookline, Massachusetts; Miss Maria Daniell, lecturer on foods, Boston; Miss Emily Huntington of the New York Cooking School; Miss Maria Parloa, cook and lecturer of New York City; Mrs. William G. Shailer, president of the New York State Household Economics Association, and Mrs. W. V. Kellen of Boston. There was no representative from the land-grant colleges or from the federal government at Washington. Professor Atwater sent his regrets.

There were eighteen items in the agenda. Among these were the classification of the subject of home economics, courses of study in this subject for public schools, the training of teachers, cooperation between experiment stations and schools of domestic science, industrial science in high schools, domestic science in the farmers' institutes, what domestic science might do to help the woman who does her own work, simplified methods of housekeeping, standards of living as affected by sanitary science, compilation of results of experience in teaching domestic economy, and preparation of a series of papers on domestic science which the Government might publish.

The Conference first took up the matter of classification. Mr. Dewey in his library classification had put what is now included in home economics under "Production." The conference put it under "Economics of Consumption" and called it definitely "Home Economics."

The second conference had a somewhat different constituency. For the first time Miss Abby Marlatt, then of the Providence Normal Training School, Miss Isabel Bevier of the University of Illinois, Miss Caroline Hunt, then of the Lewis Institute, Chicago, and Miss Emma Jacobs, director of cooking in the schools of Washington, D. C., were there. The agricultural colleges were represented by Miss Meredith of Minnesota. The members of the first Conference had sent out a questionnaire, as is the habit of such organizations, and out of 89 institutions to which inquiries were sent 58 replied that they were teaching something in the field of home economics, for example, personal hygiene, sanitation, bacteriology. Twelve had courses in domestic science, but eight of these were elective. At this second conference committees were formed. It was on the work of these committees that afterwards was based the greater part of the discussions in the conferences. The committees on courses of study and on research were very important.

At the third conference Professor Atwater came, as well as Miss Helen Louise Johnson and Miss Martha Van Rensselaer. It was reported

that the graduates of Smith, Vassar, and other women's colleges had agreed among themselves that a department of domestic science should never be organized in cultural colleges. A bibliography listing over 1,500 works on subjects related to home economics was presented to this conference and published as Bulletin 52 of the New York State Library.

In 1903 the conference went to Boston to hold its sessions at Simmons College, which had been established the previous year, and which had refused to establish a department of home economics because it was afraid this would break down the college standard. The National Education Association was meeting at the same time, so the conference had a joint session with its Section on Manual Training, the subject being "Home Economics in Higher Education." Mrs. Richards presided and the college course was presented at that meeting. It was to include chemistry, physics, biology, bacteriology, botany, physiology and hygiene, domestic science, mathematics, English, modern languages, and history.

The meeting in 1903 was much more largely attended than the previous meetings, and the fame of the Lake Placid converences so spread that afterwards they had a more representative attendance.

At the conference in 1904 Miss Hunt presented the report of the Committee on College Courses. She was then at the University of Wisconsin, and she argued that the course in home economics should have a definite collegiate value.

The final conference was held at Chautauqua, New York, in 1908, and there Mrs. Richards summed up the ten years' work of the conferences. She said that in general these meetings had done much for the promotion of the literature of home economics, the organization of courses of study, and the encouragement of research by the Government and in the universities. At the very close of that year was held the meeting at which the American Home Economics Association was organized, with Mrs. Richards as its first president.

I attended a few of these conferences, and I want to leave on record my impression of Mrs. Richards as a leader. There certainly was never a more gracious lady, or one who understood more thoroughly what was really needed in this movement. The things that she did show great tact and great wisdom. She had our full respect, admiration, and love.

THE MULTIPLE NATURE OF VITAMIN B

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Until quite recently the term vitamin B was always used to denote a water-soluble, appetite-stimulating, growth-promoting vitamin widely distributed in animal and plant tissues. Evidence noted a year ago (1) as indicating that it contains at least two substances neither of which is growth-promoting in the absence of the other has been confirmed by many investigators, notably Salmon (2), Chick and Roscoe (3), Sherman and Axtmayer (4), and Williams and Waterman (5). The failure, however, to adopt a uniform nomenclature for the two vitamins whose separate existence in what has been known as vitamin B appears to be definitely established has caused considerable confusion. In papers appearing in 1927 no less than ten different terms have been used to distinguish between the two vitamins. Among these are the heat-labile and heat-stable factors, the antineuritic and antipellagric factors, vitamins B-P and P-P, vitamins B_1 and B_2, and vitamins F and G. One investigator uses the term vitamin B *sensu stricto* for the heat-labile vitamin and P-P factor for the heat-stable vitamin; while another prefers to call the heat-stable vitamin vitamin B *sensu stricto* and the heat-labile vitamin the antineuritic vitamin. Others, apparently ignoring the important fact that neither of the two vitamins supports growth in the absence of the other, cling to the old names, antineuritic vitamin B and growth-promoting vitamin B.

Space does not permit a lengthy discussion of the relative merits of these different terms, but in the light of our present belief in the multiple nature of vitamin B it is clearly inconsistent to use the term vitamin B for either one of the factors alone, while to use B_1 and B_2 is not only awkward but implies two parts or phases of the same substance rather than two independent vitamins. Descriptive adjectives, while occasionally used in vitamin literature, have the objection of giving undue emphasis to the effect of complete absence of the vitamin in question, a situation which is seldom confronted in ordinary nutrition. The system of vitamin nomenclature which has stood the test of time is the simple one of designating the separate vitamins by capital letters in alphabetical sequence. Since vitamin B cannot be used for either of the two newly-recognized vitamins of which it is composed without a complete revision of the significance of the term but can still be used

without change in meaning for the combination of the two (or more) factors as existing in food materials, the designation of the two factors as F and G would seem to be the most logical procedure—F standing for the earlier-known heat-labile antineuritic vitamin and G for the heat-stable vitamin which may possibly be identical with the anti-pellagric vitamin of Goldberger (6).

In spite of this confusion of terms much information of practical value has been obtained during the past year on the relative distribution of vitamins F and G in various sources of vitamin B. Following the customary technique for vitamin B determinations, the ideal method of ascertaining the proportion of F and G consists in comparing the amount of material necessary to produce the desired effect (whether maintenance or growth at a definite rate) when fed as the sole source of vitamin B with the amounts required when supplemented in turn with definite amounts of a standard source of vitamin F and of vitamin G. The instability to heat of vitamin F makes the problem of securing a concentrate of vitamin G comparatively simple, and autoclaved yeast is generally used. It is much more difficult to secure a preparation of vitamin F relatively free from vitamin G. One of the purest preparations thus far obtained is the yeast concentrate, torulin, prepared by the method of Kinnersley and Peters (7). Most investigators have thus far been content to use preparations known to be relatively richer in F than in G but still containing appreciable amounts of the latter. If with any material being tested loss in weight is prevented, weight is maintained on a lower intake, or more rapid growth is secured following the addition of a small amount of a vitamin F concentrate, the conclusion can be drawn that the limiting factor is vitamin F, or, in other words, that the material is richer in G than in F. If, however, there is no response on the addition of a vitamin F concentrate but a rapid response following the addition of autoclaved yeast or some other source of vitamin G, the material is judged to be richer in F than in G.

Following this general plan Salmon (2) found green leaves, as represented by the leaves of velvet beans and rape, to be richer in vitamin G than in vitamin F; and seeds, as represented by soy beans and rape seed, to be richer in F than in G. Chick and Roscoe (3) demonstrated in a similar manner that brewer's yeast is a rich source of both vitamins and wheat embryo rich in vitamin F and deficient in vitamin G. Sherman and Axtmayer (4) confirmed the results with wheat embryo by finding whole ground wheat to be richer in F than in G, and also showed that skim milk is richer in G than in F. Outhouse, Macy, Brekke,

and Graham (8) also obtained some evidence that cow's milk is richer in G than in F, but with the same technique Macy, Outhouse, Graham, and Long (9) found human milk to be richer in F than in G.

Daniels and Brooks (10), in attempting to explain the unfavorable symptoms reported by Hartwell (11) as occurring in suckling rats whose mothers received evaporated milk as the sole source of vitamin B, found that the addition of wheat embryo extract to the evaporated milk prevented these symptoms and concluded that in the evaporation the heat-labile vitamin F (limiting factor in the vitamin B complex of milk) is destroyed. Eddy (12) has shown a similar destruction of vitamin F in cooked spinach and has demonstrated that the banana, hitherto considered as only a fair source of vitamin B, is relatively rich in vitamin G and deficient in vitamin F.

The results to date, while too few to permit of general conclusions, are nevertheless very suggestive. It would seem that any material hitherto considered to be a poor source of vitamin B should be tested for F and G to determine whether or not it is rich in one or the other of these vitamins and thus may only require supplementing by a good source of the limiting factor to become a satisfactory source of the vitamin B complex. The relative distribution of F and G in seeds and green leaves affords another demonstration of the protective value of leafy vegetables. The higher content of G than of F in cow's milk and of F than of G in cereals shows the value of combinations of bread or cereal and milk. The results obtained with evaporated milk and with canned spinach indicate that a favorable balance between vitamins F and G in raw materials may be upset in cooking, and that a diet consisting largely of cooked food may be improved by the inclusion of a good source of vitamin F. It is becoming more and more evident that an abundance of vitamin B is essential for growth, for well-being at all ages, and especially for successful lactation. Consequently every effort should be made to secure favorable proportions of F and G in the diet.

REFERENCES

1. Smith, Sybil L. Recent progress in vitamin research. J. Home Econ. **19**, 189–197 (1927).
2. Salmon, W. D. On the existence of two active factors in the vitamin B complex. *J. Biol. Chem.* **73**, 483–497 (1927). Abs. in J. Home Econ. **19**, 708 (1927).
3. Chick, H., and Roscoe, M. H. On the composite nature of the water-soluble B. vitamin *Biochem. J.* **21**, 698–711 (1927). Abs. in J. Home Econ. **19**, 708 (1927).

4. SHERMAN, H. C., and AXTMAYER, J. H. A quantitative study of the problem of the multiple nature of vitamin B. *J. Biol. Chem.* **75**, 207–212 (1927). Abs. in J. HOME ECON. **20**, 214 (1928).
5. WILLIAMS, R. R., and WATERMAN, R. E. The composite nature of vitamin B. *Proc. Soc. Exptl. Biol. Med.* **25**, 1–3 (1927).
6. GOLDBERGER, J., WHEELER, G. A., LILLIE, R. D., and ROGERS, L. M. A further study of butter, fresh beef, and yeast as pellagra preventives, with consideration of the relation of factor P-P of pellagra (and black tongue of dogs) to vitamin B. *U. S. Pub. Health Repts.* **41**, 297–318 (1926). Abs. in J. HOME ECON. **19**, 189 (1927).
7. KINNERSLEY, H. W., and PETERS, R. A. Antineuritic yeast concentrate. II. The use of norite charcoal in the concentration of torulin. *Biochem. J.* **21**, 777–790 (1927).
8. OUTHOUSE, J., MACY, I. G., BREKKE, V., and GRAHAM, A. Human milk studies. IV. A note on the vitamin A and B content of cow's milk. *J. Biol. Chem.* **73**, 203–208 (1927). Abs. in J. HOME ECON. **19**, 468 (1927).
9. MACY, I. G., OUTHOUSE, J., GRAHAM, A., and LONG, M. L. Human milk studies. III. The quantitative estimation of vitamin B. *J. Biol. Chem.* **73**, 189–201 (1927). Abs. in J. HOME ECON. **19**, 468 (1927).
10. DANIELS, A. L., and BROOKS, L. Further evidence of destruction of vitamin B in evaporated milk. *Proc. Soc. Exptl. Biol. Med.* **25**, 161–163 (1927).
11. HARTWELL, G. A. A comparison of dried and evaporated milks by a dietetic method. *Biochem. J.* **19**, 226–232 (1925).
12. EDDY, W. H. Vitamin B testing revised. *Proc. Soc. Exptl. Biol. Med.* **25**, 125–127 (1927).

OPEN FORUM

Student Clubs: Money Raising. In a study made of student clubs in the United States in 1926, it was found that in 95 per cent of the 154 clubs reporting, dues were $1.00 or under. Perhaps because of the low dues and the fact that many of the desired activities of clubs require money, a majority of the clubs found it necessary to resort to some money-making schemes.

The methods used for raising money and the uses requiring additional funds were varied and interesting. The raising of the money frequently formed an active part of the club's work. While many methods were used, it is wise for clubs to consider those which yield the largest returns for the work, give the girls the most valuable experience, and use only a reasonable amount of time.

Sales of all kinds were popular. One wondered how so many kinds had been thought of. Articles in the food sales included as baked dishes, sandwiches, cookies, pie, cake, Eskimo pie, "frost bite" (similar to Eskimo pie), fruit cake, candy, peanuts, popcorn, "hot dog," soup, hot drink, punch and wafers, marmalade, jelly, canned fruit and vegetables. Other sales included flowers, children's and other clothing, hosiery, needlebooks, pencils, Christmas dolls, Christmas cards, and football tickets. There were also rummage and advertising sales and bazaars.

Sometimes the sales were held in connection with an athletic event, school play, style show, or other school affair, or even during the noon hour or after school. In one school in which bazaars had not been successful at ordinary times, these were found quite successful when held in connection with a football game.

Some clubs found it profitable to take orders for subscriptions to certain good magazines, or to take orders or sell chrysanthemums at Thanksgiving. The club at the University of Texas in this way cleared $83.00 toward its scholarship fund.

Shows of all kinds as money-making schemes were popular—plays, vaudeville and minstrel shows, cabarets, movies, and benefit pictures. Varied types of parties or stunt programs found favor, such as charity parties, bridge parties, dances, May fêtes, spring festivals, novelty teas, outdoor picnics, school carnivals, and style shows for which perhaps an admission was charged.

Catering for banquets, luncheons, and special dinners, for example, for Rotarians, Shriners, and Farmers' Institutes; serving at banquets; managing tea rooms and cafeterias; and cafeteria service at district or county teachers' meetings were all tried successfully.

Other less common methods of earning money were used: hemming napkins for women in the local community; making special party decorations and favors; decorating the hall for a special banquet of community, high school, or town organization; compiling and publishing a cook book in cooperation with a local woman's club; arranging a float for a local organization in a town parade; dyeing boy's jerseys and mending baseball suits; or, as in one college, setting up a beauty parlor for manicuring, shampooing, or shining shoes. Some clubs tried giving each member a certain amount of money and asking her to double it, others have divided the club membership into a certain number of groups and made each group responsible for raising money by some special scheme.

Clubs have different motives for raising money. Among those studied 84 clubs, or 55 per cent of those reporting, raised money for such current expenses as the college annual, 81 clubs or 53 per cent for such club activities as contests and trips; and 67 or 44 per cent for some outside activity or service.

Among the many worth while types of service in which clubs have been interested, are contributing to the Ellen H. Richards Memorial Fund, to the home economics department at Constantinople College, to Chinese student scholarships, local home economics scholarships or loan funds; sending JOURNAL subscriptions to foreign home economics departments or to less well-equipped high schools in mountain districts.

Several clubs have assisted in some such community service as that of the local health center or the social worker; others have helped the local Red Cross by making infants' garments, dressing dolls, or cooperating and working with Red Cross nurses among rural women; others have aided in the Better Homes campaign. One club prepared and served refreshments at the Parent-Teacher Association meetings two times each month. At Christmas time some have arranged boxes for the poor; helped with celebrations for day nurseries; made flannel pajamas, scrap books, toys, or dressing dolls for sick children or orphan homes; packed baskets or tray favors for soldiers in local hospitals, or made jellies for local hospitals. At other seasons they have contributed to the local milk fund for needy children, arranged parties for the less privileged children of the town, made over garments for the poor, or done sewing for the old ladies home.

The clubs in Virginia have the unique distinction of having all joined together in establishing the Grace Schermerhorn Memorial in the form of an endowed bed in the Crippled Children's Hospital at Richmond, at a cost of $5,000. The clubs are paying this off as rapidly as possible.

Sometimes the needs of the school are chosen as the object of club service, and nothing gives a club a stronger sense of usefulness than making its school or department more attractive. Providing furnishings for the kitchen, dining room, rest room, or infirmary of the school; establishing a library in the home economics department; giving the library subscriptions to the JOURNAL OF HOME ECONOMICS or other valuable magazines; making curtains for the college stage; beautifying the grounds with flowers and shrubs; working toward the establishment of a practice cottage instead of a practice apartment; sending delegates to state and national home economics meetings,—all these have been successfully accomplished by clubs.

Aside from the service which the clubs render to others by means of the money which they raise, many fine and helpful things have been done without expense to the clubs. Suggestive examples are helping to train for leadership in organizing and carrying on clubs; assisting in the Big Sister activities of the large school; writing a play or taking charge of exhibits and posters in store windows for Better Homes Week; planning and presenting a program for the high school assembly; giving health talks in grade classes; taking the responsibility of ushering at school entertainments; acting as guides during "open house;" serving at school banquets; repainting furniture or woodwork for the department; or doing mending on such school property as towels, curtains, typewriter covers, footballs, basketballs, and tennis nets.

SAIDEE E. STARK,
Teachers College, Columbia University.

Seams and Finishes for Dresses. The clothing teacher and the home dressmaker alike often wonder what types of seams are generally preferred for various purposes and to what extent it is worth while to develop skill in making them. Of possible help in answering such questions are data which were gathered in connection with a cooperative project of the home economics department of the University of Maryland and the Bureau of Home Economics of the United States Department of Agriculture and which are therefore presented here.

The seams of a garment produce lines. Lines in pleasing proportions and in correct relation to the figure are the dominant factors in producing

style in a garment. Just as the architect considers certain structural elements in planning a house, so the home dressmaker must consider the structural elements in making a dress, and if she is wise she will realize that seams are one of the fundamental means employed to create desired effects and give beauty. A shoulder seam that slants to the front gives a round-shouldered appearance to the wearer and an underarm seam that slopes away from the front makes the waist look smaller in the back. These and many other examples might be cited to show that seams must be considered carefully if the lines of the pattern are to be reproduced accurately.

The time required to make the seams must be taken into consideration. Much of the drudgery of home sewing can be eliminated and time saved for other activities if the traditional ideas concerning what constitutes good workmanship are examined in the light of modern demands and those discarded which do not give the results now desired. Moreover, if much time is required for making the seams of a garment, the material is handled a great deal. This takes away its freshness and gives the garment an old and "ordinary" appearance. Often this is the reason it is said to look "home made."

At the present time undoubtedly many women prefer the appearance of ready-made clothing. There are, of course, a number of reasons for this, but many of these are directly or indirectly related to the matter of seam selection and construction. It therefore appears advisable for women doing home sewing and especially for those teaching the subject to study more critically modern construction tendencies as found in ready-made garments and compare them with present home and classroom practices.

With that purpose in mind, approximately 450 dresses of silk, cotton, linen, rayon, and wool were examined in Washington shops. The retail price of these ranged from $5 to $150. Only four types of seams were found, French, hemstitched, plain, and mock or imitation French. The latter were made chiefly in two ways. Sometimes the plain seam had been made and the raw edges turned in and stitched together, thus leaving two rows of stitching exposed instead of one as in the French seam. In other cases, one edge of the plain seam was turned in, lapped over the other and stitched close to the fold. The plain seam was used most often except in the very low-priced cotton dresses. In garments priced from $45 to $150, 65 per cent of the seams were plain, and 50 per cent were plain in the garments priced from $10 to $45. Seventy-five

per cent of the seams in the cheap cotton dresses were French. The other seams were of the other three types mentioned above, but no one of these predominated.

The plain seams were finished in the following ways: no finish; edges overcast together; edges overcast separately (most of the hgiher priced garments, especially the so-called French gowns had seams of this type); pinked; picoted; each edge turned back and stitched; one side of the plain seam left a little wider than the other and this turned back over the narrow side and stitched; edge bound separately or together; selvage left unfinished; machine overcasted.

The type of seam used apparently bore no relation to the cost, material, type, or purpose of the garment. In the better dresses, however, there was wider seam allowances, the stitching was straighter, and more care had been given to the tension adjustment and similar details.

The following list of seams and finishes was then compiled from about a dozen of the books now used in high school and college clothing classes. This should be at least indicative of the subject matter being taught. Some of these seams are, of course, primarily intended for use on underwear.

Seams

1. Plain
2. Flat fell
3. Standard flat fell
4. French
5. Lapped English fell
6. Corded
7. Imitation French
8. Tucked
9. Welt
10. Slot or open
11. Strapped
12. Rolled
13. Whipped
14. Open running
15. Open bound
16. Hemstitched
17. Beaded

Finishes

1. Overcasting
2. Pinking
3. Imitation French seam
4. Binding
5. Picoting
6. Catch

These observations are at least thought-provoking. Undoubtedly there has been a tendency to retain the traditional ideal of "sewing a fine seam" in our clothing construction rather than to adapt our prac-

tices to present needs. There are, of course, many phases of the subject which should be considered before any radical changes are made. However, it might be well for teachers to consider seriously whether the seams and finishes being taught have enough intrinsic value or the processes involved in their construction enough educational value to warrant continuing such instruction. If the question is one of the relative strength or other physical characteristic of the finished product, laboratory tests will decide it. Studies of this type are being carried on by the author in the laboratory of the Bureau of Home Economics.

Most experienced clothing teachers will agree that the technique required to make a plain seam is very simple in comparison with that necessary for other seams. It can be executed much more quickly and accurately, and the inexperienced person has less trouble in fitting when she uses that seam. The concentration of effort on a systematic use of special seams for essential closings and the use of the plain seam for other purposes with machine overcasting on materials that fray would certainly decrease the time used in making a dress. With all these facts in mind it might be well to consider whether we would not be meeting present needs more adequately if we focussed the attention of the woman who sews on the production of lines of style and beauty rather than on a detailed knowledge of construction processes more rarely used.

FRIEDA W. MCFARLAND,
University of Maryland.

A Basal Diet for Nitrogen Balance Experiments.[1] The performance of nitrogen balance experiments aids the student greatly in understanding nitrogen metabolism and the relationship between food and excreta. Such experiments are seldom included in a college course because of the difficulty encountered in analyzing the many foods in the ordinary diet. Students who take their meals in dormitory dining rooms find it impossible to ascertain their food consumption exactly, while it is difficult for them to prepare their own meals with satisfaction and ease.

To make nitrogen balance experiments practicable for class work, it is necessary to reduce the number of food analyses to a minimum. For example, to have one analysis of each food sufficient, foods must be

[1] Based in part on a thesis submitted by Louise M. Pickens in partial fulfilment of the requirements for the degree of master of science, Iowa State College, 1927.

chosen which will not deteriorate within the time of the experiment. In experiments conducted at Iowa State College during the past year, a basal diet was formulated which seemed to meet the above requirements. The foods used were easily prepared, easily analyzed, easily measured, and palatable. The diet consisted of soda crackers, American cheese, apple butter, unblanched almonds, and approximately two quarts of water daily. The apple butter was prepared in the foods laboratory by cooking the edible portion of the apples with sugar for eight hours. The other foods were ready for consumption as purchased.

Daily portions of each food for an entire experiment were weighed out, wrapped in waxed paper, and used as needed by the subject. The most satisfactory apportionment of the food exclusive of the apple butter, for the day was found to be:

Breakfast:	
Almonds	45 grams
Crackers	50 grams
Hot water	2 cups
Lunch and dinner:	
Almonds	44 grams
Crackers	50 grams
Cheese	50 grams
Water	2 cups

The amount of apple butter consumed daily by each subject was that made from 200 grams of raw apples, or about 70 grams of the butter. This was eaten at breakfast and dinner.

The basal diet furnished about 2200 calories and supplied amounts of protein, carbohydrate, fat, calcium, and phosphorus sufficient to satisfy present dietary standards, although the iron content was lower than the standard set by Sherman.[2] Some vitamin A was supplied by the cheese and vitamin B by the almonds. The diet was probably poor in vitamin C. The minerals of the diet as calculated from Sherman's tables furnished a basic ash equivalent to 1 cc. of normal acid. In table 1 are given the nitrogen determinations made on all foods of the diet, together with other data calculated from the figures given by Sherman.

[2] SHERMAN, H. C. The chemistry of food and nutrition, New York: The Macmillan Company, 1926.

TABLE 1

Nutrients and energy of food materials used in basal diet

FOOD MATERIAL	WEIGHT	FAT	CARBOHYDRATE	PROTEIN	NITROGEN	CALCIUM	PHOSPHORUS	IRON	ENERGY
	grams	*grams*	*grams*	*grams*	*grams*	*grams*	*grams*	*grams*	*calories*
Almonds	133	732	23.1	29.1	4.75	0.319	0.620	0.0052	863
Apples	200	10	28.4	0.3	0.04	0.014	0.024	0.0006	126
Cheese	100	359	0.3	21.9	3.50	0.931	0.683	0.0013	439
Crackers	150	136	109.6	14.4	2.30	0.033	0.153	0.0022	621
Sugar	50		50.0						200
Total	633	1,237	211.4	65.7	10.59	1.297	1.480	0.0093	2,249

The diet was originally planned for use in experiments to determine the effect of grape juice on the nitrogen retention of adults, and for that reason no difficulty was presented by the fact that it is low both in iron and in vitamins. When using it for class work, however, it is advisable to supplement it by fresh food with low nitrogen content. Three hundred and fifty grams of head lettuce daily were found by one of the students to be a valuable and practicable addition. The fluctuations in the nitrogen content of lettuce are negligible. Moreover, when lettuce was added to the diet nitrogen equilibrium appeared to be more quickly established.

The diet (without supplement of lettuce) was used successfully by five individuals. During the longest experiment, which lasted 24 days, the subject showed no ill effects from this prolonged abstinence from ordinary food. Ten days was the usual length of the periods. For class work, however, the periods were shortened to 6 days, 3 for adjustment and 3 for collections. The subjects in all cases retained their usual good health and good spirits. On the first day of each experiment they found it somewhat uncomfortable to chew the almonds, but this difficulty was quickly overcome. The subjects found the food satisfying and not monotonous. They were pleased with the ease of preparation of their meals. No digestive disturbances were noted either when the basal diet was eaten alone or when it was augmented by lettuce or grape juice. The effect of the diet was laxative, perhaps because the applies and crackers increased the bulk of the food and the almond skins furnished considerable roughage.

Table 2 gives the daily average results of the nitrogen balance experiments carried on by these five subjects. The difference in the nitrogen content of the food is due to the fact that the subjects ate different

TABLE 2

Average daily nitrogen intake, outgo, and balance of 5 subjects on basal diet

SUBJECT	OUTGO				GAIN
	Intake in food	In urine	In feces	Total	
	grams	*grams*	*grams*	*grams*	*grams*
1	11.36	9.49	1.27	10.76	0.60
2	10.93	8.21	2.14	10.35	0.58
3	13.57	12.00	1.17	13.17	0.40
4	11.36	9.55	1.25	10.80	0.56
5	11.46	9.74	1.09	10.83	0.63

amounts of crackers. In every case the nitrogen balance approached equilibrium during the 4th, 5th, and 6th days of the period.

Summary. A basal diet of almonds, apple butter, cheese, and crackers has been worked out for use in nitrogen balance experiments.

The advantages of this diet are that it can be prepared at home or school with a minimum of labor; that one analysis of a food is sufficient in each experiment; that uniformity of diet throughout the experiment is secured; that the diet has been found not to give rise to digestive disturbances; and that it is palatable and satisfying.

LOUISE M. PICKENS AND
ROSSLEENE M. ARNOLD,
Iowa State College.

Teaching the Signs of Child Health. "The Picture of the Optimal Child" was the theme of a training school for extension workers held in Jackson, Mississippi on November 7 and 8, 1927 in cooperation with the Mississippi State Board of Health. The conference, which was planned by the state home demonstration agent, the nutrition specialist, the state health officer, and the extension agent in nutrition from the U. S. Department of Agriculture, was attended by Mississippi state extension specialists and district home demonstration agents and by twenty selected county home demonstration agents. Assistance was given by Miss Eyrick, oral hygienist of the State Board of Health, and Dr. Hardie M. Hayes who for a number of years has conducted the examinations in the state health contest for 4-H Club members.

The aim of the conference was to fix in mind the picture of the optimal child and to discuss ways and means of using this picture to motivate the home demonstration program for a balanced food supply, well prepared food, and good food habits in Mississippi.

"First catch your hare." The most difficult step was to find a dozen children ranging from 3 to 18 years of age who more or less acceptably illustrated the optimal. The standard used was that outlined in "Signs of Health in Childhood" by Chaplin and Strecker, recently published by the American Child Health Association. This publication, undertaken originally at the suggestion of the Extension Service, was especially helpful throughout the program.

The first session demonstrated the points in which optimal children resemble each other and the points in which they may differ. The younger children were used nude; the older children appeared in bloomers, track suits, or bathing suits.

Under the heading of "efficient functioning" were discussed and illustrated facial expression; unobstructed breathing; clear eyes; clean tongue; sweet breath; color and quality of skin; color of mucous membrane; condition of subcutaneous tissue and of muscles; and weight for height, age, and build. Under the heading of "optimal build" were discussed the quality, regularity, and alignment of teeth; shape of chest and back; normal growth of extremities and joints; and strong arches. Good posture, efficient muscular coordination, bodily repose and endurance were also illustrated. The need of building early for good bone and tooth structure was particularly stressed and correlation was made with the food selection score card used by the Extension Service.

Characteristics in which optimal children may be expected to differ at different ages are body proportions, degree of muscular development and muscular coordination, and posture. Factors such as type of body build, rate of growth, and to some degree weight for height and age depend to a large extent upon heredity. In this connection the uses and limitations of height-weight-age tables were discussed and the importance of interpreting this factor by means of the other findings was emphasized.

The afternoon session stressed typical deviations from the optimal, as commonly found in Mississippi.

These deviations—bony deformities of the head, chest, limbs, joints, and feet; narrow jaw, arched palate, irregular or defective teeth, defective enamel; enlarged glands; mouth breathing; anemia; emaciation; fatigue posture; overweight in babies with tendency to edema—were discussed and demonstrated in the children used as illustrative material. The Mississippi program of oral hygiene was also discussed.

On the second day, slides were used to show the large amount of bone building which must take place during the growth of the child

and explain the location of possible bone defects, the effect of rickets on the development of bones and teeth, and the effect of various dietary deficiencies on growth and development.

Next, the audience was divided into groups of three and each group was given a series of children selected at random from the cooperating school, to evaluate on such points as type of build, chest formation and development, back (straightness and normal curves), posture, arches, straightness of limbs, joints, color and condition of skin, glands, muscle tone and subcutaneous fat. In this study they were assisted by the two physicians. In order to reaffirm the picture of the optimal, the final demonstration was a review, point by point, of the most perfect specimen from the "optimal" group, a child whose whole history had contributed to make her what she was.

The program closed with a round table discussion led by state and national nutrition specialists on: "How we may use the picture of the optimal child to motivate present extension projects in food selection, food preparation, an adequate food supply for the farm family, and growth work for 4-H club members, and also the various lines of maternal and child care and feeding now being pushed by the State Board of Health."

MIRIAM BIRDSEYE,
United States Department of Agriculture

The Iowa Child Welfare Research Station. It was for the purpose of the scientific study of the child and for a dissemination of that knowledge that the Iowa Child Welfare Research Station was established in 1917. Since its founding, the staff has been accumulating a body of knowledge in regard to child nature and child development that is now being made available through publications, lectures, and University and field courses.

The Stations serves as the coordinating center for all the work in child development and in child study and parent education that is being carried on by the three state educational institutions and various public school systems in the state and is cooperating directly with various state organizations interested in child life.

One of the chief aims of the Station is the training of graduate students and for this purpose facilities for research are offered in the preschool laboratories and opportunity for advanced study is given in courses in mental and physical development of the child, child behavior, child

management, household management, child study and parent education, the child in relation to the home, child nutrition, and the training of teachers for kindergartens and preschools. Emphasis is placed upon the study of infancy and the preschool age, since these periods are of such basic importance in child development.

Over one hundred investigations either in major or minor studies in child development are being carried out by members of the staff, graduate students, and investigators from other divisions and colleges of the University. Some of the studies have been continued for a period of several years. These include studies in the mental and social development of young children, in physical development, in nutritional development, and in special projects in parent education. This research work furnishes laboratory training for graduate students, the foundation for courses in child development, and the basis for service in parent education work in the state.

The four preschool laboratories have demonstrated their worth as research and training centers. Ninety-four children were registered for the fall term of this year and forty others are waiting to enter. There has been very fine cooperation on the part of the parents and of other departments of the University.

BIRD T. BALDWIN,
Iowa Child Welfare Research Station, Iowa City.

EDITORIAL

Des Moines and Iowa. A few weeks after this JOURNAL appears members of the American Home Economics Association will receive a bulletin giving them full information about Des Moines hotels and railway rates and certificates, together with the latest news of the program for the annual meeting, June 25 to 29. Meanwhile all who have any idea of going to Des Moines (and what home economist has not, at least in her armchair travels?) will be interested in the editorials which follow. The two places to visit in Iowa may come as a surprise to those who have imagined the state entirely without scenic beauty or social picturesqueness and may incline them to tarry a while for sightseeing and vacationing. The statement as to what is going on in connection with child study in various places in the state may also tend to tempt some to plan for other stopping places before and after Des Moines. In fixing dates of arrival at Des Moines all are advised to remember that while the meetings of the Association open on the morning of Tuesday, June 26, valuable conferences for school supervisors and for extension workers are to be held throughout Monday, June 25, at Fort Des Moines Hotel, the regular Association headquarters.

Amana: the Community of True Inspiration. Situated between Des Moines and Iowa City in one of the garden spots of Iowa, the seven villages of Amana,—Old, West, South, High, East, and Middle Amana and Homestead—offer the visitor a glimpse of a bit of the Old World in the New. Each of the villages, consisting of forty to a hundred weather-beaten frame, brick, or sandstone houses arranged on the plan of the German *Dorf*, has its own church, bakery, school, store, dairy, kitchen house, and the many other institutions essential to true community living.

This legally incorporated federation of villages harks back to the Germany of 1714 and the protest of the German mystics or pietists, to which these "True Inspirationists" owe their origin, against the dogmatism grown up in the Lutheran Church. Cruelly persecuted by both church and state but steadfastly believing in the divine guidance of the "Instruments" through which the Lord spoke to them, eight hundred of the Brethren left Germany in 1843 and settled on the Seneca Reserva-

tion near Buffalo, New York. The "world" came too near as Buffalo expanded, so land was purchased in Iowa and the first village there was laid out in 1855 and the last of the seven completed in 1861.

This community of eighteen hundred people is probably the nearest approach in our day to the Utopian dream, tilling with the most modern agricultural implements their twenty-six thousand acres and manufacturing in their mills woolen goods and calicoes known all over the country. Common sense and sanity in business affairs and in the management of the colonies by their spiritual and temporal leaders have resulted in steady and continuous growth in prosperity and membership. The products of the mills may be purchased at the store in Old Amana.

The houses and dress of the Brethren are plain, but from spring until fall each village is made beautiful by the greatest profusion of quaint, old-fashioned flowers. A hotel has been established to take care of "worldly" visitors, who find here a kindly refuge in an unhurried, peaceful atmosphere. Of interest particularly during the month of July are the hundreds of great buff blossoms of the lotus which lift their heads above a little sheet of water between two of the villages.

McGregor and the Hills of the Mississippi. McGregor lies pocketed in the hills near the northeastern corner of Iowa, in the very heart of the beautiful scenery of America's greatest river and near the center of the great Mississippi River Fish and Game Refuge recently created by Congress. Directly opposite it on the Wisconsin shore, and reached by a car ferry, is Prairie du Chien, the oldest town in the Old Northwest. Three state roads enter each town, and two railroads serve them.

The part of McGregor known as McGregor Heights is a high, heavily wooded hill with many summer cottages and a camp ground on its summit. This section of the town is the site of the famous Wild Life School which holds its sessions every August. Adjoining the Heights is Ridgewood, a forest preserve with summer homes and a splendid golf course, overlooking the river and the surrounding country. Much of both these sections is still virgin forest, vocal with song birds, abounding in geologic interest, and everywhere are splendid fields for nature study. The magnificent view of the river, its islands, the commanding bluffs, and the joining of the Wisconsin River with the Father of Waters is comparable to the Hudson River and its Palisades.

McGregor is the point of departure of many interesting excursions

by foot, motor, motor boat, and river steamer. Among possible objectives for trips are Pike's Peak, (not the one of Colorado fame!) Pictured Rocks, Musk Rat Farm, Fort Crawford, Fur Trading Posts and French Fur Trader's Cemetery, Indian Mounds, Lotus Lily Lake, Dripping Cave. Half-day excursions may be taken to the White Sand Cliffs at Dayton and Balsam Fir Bluff on Yellow River. Entire days may be devoted to a trip to that beautiful and historic area, Wisconsin State Park, and to steamer trips on the famous Mississippi River excursion steamers.

Reasonable and comfortable accommodations can be had in hotels and private homes in McGregor, at the Heights Inn, in motor tourist camps, and in furnished cottages rented in advance from Mr. Bickle, the proprietor of Ridgewood.

Child Study in Iowa. The child development committee of the American Home Economics Association calls the attention of members particularly interested in the problems of child development and parental education to the Institute on Parental Education which is to be held at the Iowa Child Welfare Research Station, University of Iowa, Iowa City, Iowa, June 20–22, 1928. Preliminary notice of this was given in the March JOURNAL and the article by Dr. Baldwin on page 255 and the frontispiece in the present issue are of special interest in this connection. The details of the program will be available later; there will be speakers of national note, including members of the staff at the Iowa Institute. Information regarding railway routes will be found in the Association *Bulletin*.

It is also suggested that members plan to pay special visits to the nursery schools at the Iowa State Teachers College at Cedar Falls and at Iowa State College at Ames. The nursery school at the State Teachers College has been opened primarily to give elementary school teachers an opportunity to know, first hand, children and how they develop. The one at Iowa State College was organized in 1923 to provide for students of home economics a thorough course in child development as a part of their preparation for homemaking. For years lecture and discussion classes had been given in child care but there had been no facilities for contact with young children. The nursery school fills this lack and gives chance to study the problems of child behavior, of child nutrition, of posture for young children and for the development of the child in relationship to a well-planned and well-organized social environment, such as the nursery school presents.

Nutritionists and Public Health Work. Public health work represents the contributions of many types of specialists. Nutrition workers are the most recent class of experts who are contributing their knowledge to the public health campaign. Although the youngest group, they are rapidly becoming one of the most important and most influential, and it would be of mutual advantage to develop closer connection between them and their colleagues from other parts of the public health field. The health education committee of the American Home Economics Association suggests that one way to accomplish this is for nutrition workers to join the professional organization of public health workers.

The American Public Health Association is the common meeting place for all public health specialists. Its nine sections represent these special interests, and recognizing the growing importance of nutrition work the Food and Drugs Section this year changed its name to the Section on Food, Drugs, and Nutrition. Although this is a change of name it does not represent any change in policy, since this section has for several years devoted at least one of its sessions regularly to the subject of nutrition.

In the American Public Health Association all workers meet on a common ground,—the nurse, the engineer, the health officer, and the statistician. At its meetings and in its committees they have equal power as active members and fellows. Active membership in the Association is limited to those who are professionally engaged in public health work. This obviously includes nutrition workers. Active members who have been members for two years and have rendered distinguished service in the public health field are eligible to fellowship. There are now in the Association about seven hundred fellows and about twenty-five hundred active members. There are a smaller number of associate and sustaining members.

The dues for active and associate membership are $5.00 a year, which includes a subscription to the *American Journal of Public Health*. The dues for fellows are $10.00 a year.

Applications for membership must be sponsored by two fellows of the Association. Membership in the American Public Health Association carries with it membership in the state society, where such exists. Home economists working in the field of nutrition who wish to make such application may write either to Mr. Homer N. Calver, executive secretary of the American Public Health Association, 370 Seventh Avenue, New York City, or to Miss Clyde Schuman, chairman of the

health education committee of the American Home Economics Association, and national director of the Nutrition Service, American Red Cross, Washington, D. C. The list of members and fellows of the American Public Health Association is published in the June issue of the *American Journal of Public Health.*

In a letter about such memberships Mr. Calver says:

> When nutritionists and home economists who are doing health work join local, state, and national health organizations, there is harnessed to these respective machines a new energy and a viewpoint often considered old but whose modern interpretations make it new. Modern public health work is too complex in conception and execution to leave out any important group having a distinct contribution to make. Much of our present work now centers around nutrition and the home. There is, therefore, a distinct place—and so far as the American Public Health Association is concerned,—a distinct welcome to all qualified workers in these special fields who wish to join. As they grow in knowledge and experience these special workers should make themselves felt in organizational activities.

The Near East in Motion Pictures. A new series of motion pictures which were taken in 1927 for the Near East College Association and are now distributed at low rental by the Motion Picture Exchange, Young Men's Christian Association, 120 West 41st Street, New York City, seems likely to be of special interest t home economists because they visualize places and people about which many of us have recently been thinking. The Woman's College at Constantinople, that pioneer college which now is pioneering again with its home economics department, is shown in the reel about "Four American Colleges," along with Robert College, the International College at Smyrna, and the Sofia American Schools where we hope soon to see a home economics department. Another reel is devoted to Constantinople itself and is spoken of as exceptionally clear and telling. In "Syria" are shown old cities whose names carry one deep into the past—Antioch, Baghdad, Homs—to say nothing of scenes in a Bedouin "beehive" village and camels and donkeys and horse markets, or water wheels that have turned for centuries without stopping. "Jerusalem on Easter Day" depicts the crowds at the Moslem feast of Nebi Musa which occurs on the same day as the Christian Easter, the merry-go-rounds and peep shows on the hillside facing the Garden of Gethsemane, and then takes one to the American University at Beirut with its medical and dental schools and its hospital and the Bedouins going in and out of its outdoor clinic.

Athens as it was on Constitution Day appears in another reel, with children in costume, crowds on the hill adjoining the Acropolis, the Zappeion Parade, and the breaking of ground for the new Athens College. Still another reel combines a few more views of Athens with a trip through the Peloponnesus, where one sees the peasants at their everyday work on these classic islands. In some ways the most remarkable of all is the series of pictures of "The Miraculous Ikon of Tinos," the first motion picture ever made of the festival on the little island at which this famous miracle-working image is carried in procession for a quarter of a mile over the prostrate forms of those who seek healing. The reels, which may be rented either separately or together, take about twelve minutes each to exhibit and would seem to offer an especially enjoyable and suitable entertainment for a home economics class or club interested in helping the cause of home economics at Constantinople College or elsewhere in the Near East.

Lake Placid Conferences. Readers of the news notes in the March JOURNAL will remember the account of the way in which the District of Columbia Home Economics Association celebrated Ellen H. Richards' birthday last December. The committee in charge hopes to have the report of the whole celebration made available in mimeographed form. Meanwhile the JOURNAL is fortunate in being able to publish on pages 238 to 240 the talk which Dr. True gave about the Lake Placid Conferences, the precursors of the American Home Economics Association.

Alice Peloubet Norton. Mrs. Alice Peloubet Norton, editor of the JOURNAL OF HOME ECONOMICS from 1915 to 1921, died in Northampton, Massachusetts on February 24, as the result of paralysis which had been steadily increasing since December. At the hour of the funeral services, which were from her old home in Auburndale, the home economics meeting then being held in Boston in connection with the Division of Superintendence of the National Education Association paused for a few moments in tribute to the memory of one of the best-known and best-loved of our home economists.

RESEARCH

THE VITAMIN CONTENT OF MUNG BEAN SPROUTS

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The diet of the oriental population of Honolulu (Chinese, Japanese, and Korean) includes many vegetables, among which the bean sprouts and Chinese cabbage (*Brassica chinensis*) are probably the cheapest and most used. Though some investigations have been made of the value of the former as sources of vitamins, our information is far from complete and the experimental work reported beyond was undertaken in the hope of increasing our knowledge of this important oriental food.

The bean sprouts are easily produced and sell for five cents a pound in Honolulu. The green mung beans (*Phaseolus mungo* or *P. aureus*), sometimes called green gram beans, are commonly used for sprouts and are shipped directly from China. These are small, round, green beans about three millimeters in diameter. The beans to be used for sprouting are washed a number of times in clean water, then soaked from four to eight hours, the time depending upon the hardness of the beans. Large five-gallon tin cans with perforated bottoms are used to hold the beans during the sprouting process. On the bottom of each can is placed a damp grass mat, then the soaked beans are poured in to a depth of about eight inches, and a second damp mat is laid on top to retain the moisture. The beans are sprinkled with water three times a day to insure dampness. During the sprouting period of four days the cans are kept off the floor on shelves of open slats so that there may be a free circulation of air. Absolute cleanliness and a darkened room are necessary for a good production of white sprouts. This method of production is entirely local and differs from that used in China.

The oriental people prefer a very etiolated shoot. The sprouts ordinarily found in the markets show little or no chlorophyll formation. If they have been exposed in the market before purchase the chlorophyll has increased, but coming directly from the sheds where they are grown they are entirely etiolated. The sprouts average from seven to nine centimeters in length from root tip to expanded cotyledons, of

which five or six centimeters is always thick, white, and fleshy and one or two centimeters consists of rootlet. The cotyledons are pale yellow in color and have expanded. Often the plumule of one-half to one centimeter in length has emerged from between the cotyledons. The plumule is usually yellow in color and occasionally a very pale green if the sprouts have been exposed to light.

Little work has been done on the vitamin A and B content of mung bean sprouts. Embrey (1) reports experiments on the vitamin B content of the mung bean and the mung bean sprouts. Using mice, she concluded that the dry mung beans when fed as 45 per cent of the weight of the diet contained enough vitamins A and B for growth. In experiments with 10 mice on a diet containing 25 per cent of raw dried bean sprouts and 10 mice on a diet containing 25 per cent of cooked dried bean sprouts, she found that the diet contained sufficient vitamin B for growth. Embrey suggests as a result of her experiments that vitamin B increases when the beans are sprouted.

Santos (2) working in Mendel's laboratory reports feeding experiments for vitamins B and C using dried mung beans, which he calls mongo, and the sprouts made from these beans, which he calls togi. He used recovery of weight in rats on a deficient diet as his criterion of the vitamin B content of the foods tested. The age of the animals was not stated, but most of them weighed considerably over one hundred grams when placed on the experimental diet. Both the beans and the sprouts were cooked, then dried and fed for vitamin B. He fed 7 rats on the dried beans, 4 receiving 1 gram and 3 receiving ½ gram daily supplements, and 6 rats on the sprouts, 3 receiving 1 gram and 3 receiving ½ gram supplements daily. His conclusion that the sprouted beans showed greater potency than the dried hardly seems warranted from the data submitted, though it would confirm Embrey's statement.

The work done on vitamin C in legume sprouts has been for the most part on the raw sprouts of other legumes than mung beans. Santos (2), however, reports feeding both the mung bean and its sprouts for vitamin C. He found the dried beans had very little antiscorbutic vitamin. Three guinea pigs fed 5 grams of the raw sprouts daily showed no evidence of scurvy after 90 days, but 2 guinea pigs on 1 gram of raw sprouts daily died of scurvy. Sprouts boiled 10 minutes were fed as 5-gram daily supplements to 2 guinea pigs; both died of scurvy.

Delf (3) found that 2.5 grams of raw germinated cowpeas protected guinea pigs from scurvy for 90 days. She also found that 15 to 20 grams of boiled germinated cowpeas, 10 grams of steamed, and 20 grams

of simmered fed daily gave protection. She concluded that 20 minutes of steaming or simmering in water to which ammonium carbonate had been added was the best method of cooking the germinated cowpeas.

Wiltshire (4) in 1917 found that 4 ounces of germinated haricot beans boiled for 10 minutes were more effective in curing scurvy in man than an equal amount of lemon juice. He states that vegetables such as potatoes and onions are acid before and after cooking. Bean sprouts were tested with litmus before and after cooking and were found to be slightly acid in reaction, a condition which would probably lessen the destruction of vitamin C due to heating.

The percentage composition of the dried mung beans and the bean sprouts is given in table 1.

TABLE 1

Composition of dry mung beans and fresh mung bean sprouts

	WATER	PROTEIN	FAT	CARBO-HYDRATES	ASH
	per cent	*per cent*	*per cent*	*per cent*	*per cent*
Dried mung beans[1]	11.86	22.1	0.80	58.80	3.35
Fresh mung sprouts[2]	91.74	3.15	0.08	3.91	0.44
Fresh mung sprouts[2]	93.77	2.52	0.08	2.98	0.31

[1] Embrey and Wang (6).

[2] Unpublished data supplied by the Hawaii Agricultural Experiment Station, Honolulu, Hawaii.

The Experiment Station has also given the following figures for the ash constituents of the fresh mung sprouts: calcium, 0.007 per cent, phosphorus 0.038 per cent and iron, 0.0007 per cent.

Experimental Procedure. For the experiments conducted by the present authors, the mung bean sprouts used were of the ordinary market supply. The Chinese usually prepare the bean sprouts for eating by cooking them with peanut oil for a few minutes, but such a method was not practicable for experimental purposes because of the incorporation of extra fat into the diet of the animals. All cooked sprouts fed were steamed in an ordinary steamer with perforated bottom. The time for cooking was determined by steaming several lots of sprouts for varying periods, such as 2, 3, 4, 5, 6, and 8 minutes. Oriental students were then asked to decide which sprouts seemed most like those they were accustomed to eat. Practically all agreed on those cooked 5 minutes, a period long enough to cook them through and yet leave them fairly crisp, and this cooking period was accordingly adopted.

The mothers of all rats used in the vitamin A experiments had a diet

of the following mixture: Whole ground wheat, 1000 grams; whole milk powder, 500 grams; common salt, 20 grams; soy bean meal, 100 grams. The soy bean meal was made by cooking yellow soy beans in a pressure cooker for one hour at 15 to 20 pounds pressure, drying them in the oven, and grinding fine. Several times a week fresh alfalfa was also given the mothers.

It was found that there was a 10 per cent loss of weight when the sprouts were cooked; therefore, the weight of the cooked sprouts fed to the experimental animals was fixed proportionately less than for the raw sprouts. The average number of raw sprouts per gram was three.

All experimental animals were kept in individual round wire cages with raised bottoms of wire screening to reduce feces consumptiont to a minimum. The cages were cleaned daily and the animals weighed once a week or oftener.

In the experiments on the vitamin A content of raw and cooked sprouts the following basal diet was used: Meat residue (6), 20 per cent; starch, 60 per cent; yeast, 5 per cent; salt mixture (7), 4 per cent; sodium chloride c. p., 1 per cent; crisco, 10 per cent.

The prepared meat residue was extracted three times with hot 95 per cent alcohol following Sherman and Munsell's (8) recommendation for the extraction of casein.

Before using, the mixture constituting this diet was exposed in this layers to bright sunlight for two hours between 10 a.m. and 3 p.m. to insure its vitamin D content.

White albino rats 28 to 29 days old and weighing 47 to 60 grams were placed on the above diet.

Sherman's (9) recommendations for making the experiments as quantitatively accurately as possible were followed. When the weights of the animals had become stationary or declined for one week, the weighed amounts of cooked and raw bean sprouts were fed daily (except Sundays) for 8 weeks, the aim being to feed an amount of bean sprouts that would induce a gain of 3 grams in one week or about 25 grams in the 8 weeks.

In table 2 are summarized the results of all the feeding experiments to determine the vitamin A content of raw and cooked bean sprouts. It will be noted that 4 grams of the raw and 4 grams of cooked sprouts produced gains nearest to the desired 3 grams a week. The figures seem to indicate some loss of vitamin A due to cooking, as 9 rats on 4.5 grams of raw sprouts daily gained an average of 32 grams per week, while 8 rats on 4 grams of cooked (equivalent to 4.5 grams raw) gained

TABLE 2

Average gain in weight of rats receiving raw and cooked bean sprouts as sole source of vitamin A for a period of 8 weeks

SOURCE OF VITAMIN A	NUMBER OF RATS	WEIGHT OF SPROUTS FED DAILY	AVERAGE GAIN IN 8 WEEKS
		grams	*grams*
Raw sprouts	2	3	18
	3	4	26
	9	4.5	32
	1	5	42
Cooked sprouts	2	2.7	7
	4	3.6	20
	8	4.0	22
	2	4.5	44

only an average of 22 grams per week. The results obtained when greater and smaller amounts of sprouts were fed also indicate a slight loss of vitamin A due to cooking.

Considering the markedly etiolated nature of the material, the bean sprouts appear to have a rather high vitamin A content. This is probably due to vitamin A storage in the seed and to slight vitamin A formation in the plumule. Coward (10) has shown that "vitamin A is not used up in any process carried on by living plant tissue in the dark." No attempt was made to feed entirely etiolated shoots, and some lots showed greater evidence of chlorophyll formation than others.

The bean sprouts are only a fair source of vitamin A compared with some other vegetables. Using the method of evaluation by units as suggested by Sherman (9), they were found to have about 110 to 120 units of vitamin A per pound raw or cooked, whereas Sherman reports lettuce as having 750 to 3000 units per pound and green peas 2500 to 3500.

For the vitamin B studies the following basal diet was used: Meat residue, 20 per cent; starch, 63 per cent; butter fat, 10 per cent; salt mixture, 4 per cent; sodium chloride c. p., 1 per cent; cod-liver oil, 2 per cent.

The meat residue was the same as that used for vitamin A experiments but was not extracted with alcohol. The salt mixture was identical. Sherman's (9) recommendations for feeding were again followed. The rats used weighed from 46 to 59 grams at the age of 28 or 29 days, when they were put on the above diet and the sprouts in weighed amounts were at once fed daily (except Sundays).

TABLE 3

Gain or loss in weight of rats receiving various amounts of raw and cooked bean sprouts as sole source of vitamin B. Preliminary tests

SOURCE OF VITAMIN B	LABORATORY NUMBER OF ANIMAL	WEIGHT OF SPROUTS FED DAILY	WEIGHT OF ANIMALS			DURATION OF TEST
			At beginning	At end	Gain (+) or loss (−)	
		grams	*grams*	*grams*	*grams*	*weeks*
Raw sprouts	517	1	55	40	−15	6
	519	3	52	52	0	8
	521	3	52	52	0	8
	520	5	52	67	+15	8
Cooked sprouts	518	0.9	54	41	−13	6
	522	2.7	51	44	−7	8
	523	2.7	48	50	+2	8
	516	4.5	57	65	+8	8

Table 3 gives the results of the preliminary experiments carried on in the fall of 1926. It will be seen that 3 grams of raw sprouts produced perfect results, the animals being the same weight at the end of 8 weeks as at the beginning of the experiment. Of two animals on 2.7 grams cooked sprouts (equal to 3 grams raw) one lost 7 grams and the other gained 2 grams in weight.

Following these preliminary experiments, three different lots of rats were used in similar tests during the next few months, one lot from October to December, 1926, one from January to March, 1927, and one from March to April, 1927. In these three series of tests 3 grams of raw or 2.7 grams of cooked sprouts were fed daily to the majority of the animals, but one rat received 4 grams of raw sprouts and two received 3.6 grams cooked sprouts. The average results are shown in table 4.

TABLE 4

Average gain in weight of rats receiving raw and cooked bean sprouts as the sole source of vitamin B for a period of 8 weeks

SOURCE OF VITAMIN B	NUMBER OF RATS	WEIGHT OF SPROUTS FED DAILY	GAIN IN WEIGHT OF RATS
		grams	*grams*
Raw sprouts	9	3	10
	1	4	18
Cooked sprouts	10	2.7	8.4
	2	3.6	21.5

It had been expected that by continuing to feed 3 grams of raw sprouts and 2.7 grams of cooked the results of the preliminary experiments would be confirmed, indicating that these were the unit amounts. Each time, however, these amounts proved to be greater than the unit. The nine rats on 3 grams of raw sprouts made an average gain of 10 grams; the ten rats on 2.7 grams of cooked sprouts an average gain of 8.4 grams. Moreover, the one rat fed 4 grams of raw sprouts and the two rats fed 3.6 grams cooked (equivalent to 4 grams of raw) showed much higher gains than the ones on 3 grams raw and 2.7 cooked.

We may conclude that the amount of raw sprouts to be fed daily to supply vitamin B and maintain net weight in standard rats for a period of 8 weeks lies between 2.5 grams and 3 grams, and between 2.2 and 2.7 for the cooked (equivalent to 2.5 and 3 grams of raw).

There appears to be very little loss of vitamin B due to cooking.

Bean sprouts are a better source of vitamin B than of A, compared with other vegetables. Again using Sherman's (9) unit basis, they show 150 to 180 units per pound for the raw and 150 to 170 units per pound for the cooked. Sherman gives 150 to 200 units per pound for lettuce, 120 to 140 for carrots, 150 for raw string beans, and 1000 for raw peas.

For feeding experiments designed to determine the vitamin C content of bean sprouts, guinea pigs raised especially for feeding experiments were used and the procedure recommended by Sherman (9) was followed. Guinea pigs weighing 300 to 350 grams and 6 to 8 weeks old were placed on Sherman's vitamin-C-free basal diet plus fresh alfalfa. When alfalfa was withdrawn, the weights went down, then up, then down again at the onset of scurvy. The results of feeding the bean sprouts are summarized in table 5.

Two grams of raw sprouts daily appeared to be insufficient as one of the three guinea pigs receiving this amount showed rather severe scurvy. The only sign of scurvy shown by three guinea pigs fed 2.5 grams was a loose tooth in one animal. Of the two animals on 3 grams of sprouts, each had a tooth missing or broken; this may be accounted for by the habit of gnawing at their food cups which was observed in some of the animals. These results agree with those of Delf (3) who found that a daily dose of 2.5 grams of raw germinated cowpeas protected guinea pigs from scurvy in experiments lasting 90 days.

Amounts of cooked bean sprouts corresponding to 2.0 grams and to 2.5 grams of raw, that is, 1.8 and 2.2 grams of cooked sprouts, apparently did not contain enough vitamin C to protect the animals from

TABLE 5

Weight and postmortem condition of guinea pigs receiving various amounts of raw and cooked bean sprouts as sole source of vitamin C

SOURCE OF VITAMIN C	LABORATORY NUMBER OF ANIMAL	AMOUNT OF SPROUTS FED DAILY	DURATION OF TEST	WEIGHT OF ANIMALS			FINDINGS OF POSTMORTEM EXAMINATION
				At beginning	At end	Gain (+) or loss (−)	
		grams	*weeks*	*grams*	*grams*	*grams*	
Raw bean sprouts	127	1.0	1⅘	289	174	−115	Scurvy; hemorrhages on 6 ribs
	135	2.0	6½	402	245	−157	Scurvy; severe hemorrhages on 8 ribs
	137	2.0	12	403	486	+83	No scurvy
	130	2.0	12	345	338	−7	No scurvy
	145	2.5	12	367	311	−56	No scurvy; 1 loose tooth
	136	2.5	12	295	410	+115	No scurvy
	138	2.5	12	342	453	+111	No scurvy
	124	3.0	12	288	367	+79	No scurvy; 1 tooth broken
	125	3.0		282	359	+77	No scurvy; 1 tooth missing
Cooked bean sprouts	126	0.9	3	237	189	−48	Slight scurvy
	129	1.8	1	176	101	−175	No scurvy; starvation
	141	2.2	2½	422	249	−173	Moderate scurvy
	143	2.2	2½	426	284	−142	Moderate scurvy
	123	2.7	4	236	231	−5	Slight scurvy
	128	2.7	12	315	450	+135	No scurvy
	139	2.7	12	274	381	+107	No scurvy
	142	2.7	12	396	347	−9	One loose tooth; one very slight, healed hemorrhage

scurvy. Of the four guinea pigs on 2.7 grams cooked bean sprouts (equivalent to 3 grams raw) two showed no sign of scurvy and two showed slight scurvy. Three other animals whose records are not given died from one to two weeks after the feeding of bean sprouts was started, but their refusal to eat both basal diet and bean sprouts indicated that death was due more to starvation than to scurvy.

Unfortunately this part of the investigation is not so complete as it should be because lack of time prevented tests with a larger number of animals and the determination of the exact amount of cooked sprouts needed for complete protection against scurvy. This probably lies between 3 and 4 grams. The results obtained indicate that there is considerable destruction of vitamin C even in the 5 minutes of cooking by the steaming process to which the sprouts were subjected.

In the raw state bean sprouts have a high antiscorbutic value, 180 units per pound. Sherman (9) gives lemon juice, orange juice, and

tomatoes all as having 150 to 300 units per pound. In the cooked state the bean sprouts probably have approximately 150 units per pound or possibly a little less.

Summary. The vitamin content of the sprouts of the mung bean (*Phaseolus mungo* or *P. aureus*) has been determined by feeding experiments with animals. Compared with some other common vegetables the sprouts have been shown to be a fair source of vitamin A in both the raw and the cooked state; a very good source of vitamin B, both raw and cooked; and an excellent source of vitamin C in the raw state and a good source in the cooked.

Using Sherman's unit basis for a more exact evaluation, mung bean sprouts have a vitamin A value of one-sixth to one-twenty-fifth that of lettuce and one-twenty-fifth that of green peas; a vitamin B value equal to lettuce, a little greater than carrots, and one-tenth that of raw green peas. In the raw state mung bean sprouts have a vitamin C content equal to that of lemon, orange, and tomato juice and when cooked 5 minutes a slightly lower value.

REFERENCES

1. Embrey, Hartley. Investigation of some Chinese foods. Paper 2. Feeding experiments on white mice using mung beans, mung bean sprouts, red kaoliang, white kaoliang, and Chinese persimmon. *China Med. J.* **32**, 405–410 (1921).
2. Santos, F. O. Some plant sources of vitamins B and C. *Am. J. Physiol.* **59**, 310–334 (1922).
3. Delf, E. Studies in experimental scurvy with special reference to the antiscorbutic properties of some South African foodstuffs. Pub. of the So. Afr. Inst. Med. Research, No. 14, 1921. See also *Lancet* [London] 1922. I. 576–579.
4. Wiltshire, H. W. A note on the value of germinated beans in the treatment of scurvy, and some points on prophylaxis. *Lancet* [London] 1918. II. 811–813.
5. Embrey H., and Wang, T. C. Analyses of some Chinese foods. *China Med. J.* **35**, 247–257 (1921).
6. Osborne, T. B., Wakeman, A. J., and Ferry, E. Preparation of protein free from water-soluble vitamin. *J. Biol. Chem.* **39**, 35–46 (1919).
7. Osborne, T. B., and Mendel, L. B. The nutritive value of the wheat kernel and its milling products. *J. Biol. Chem.* **37**, 557–606 (1919).
8. Sherman, H. C., and Munsell, H. E. The quantitative determination of vitamin A. *J. Am. Chem. Soc.* **47**, 1639–1646 (1925).
9. Sherman, H. C. Chemistry of Food and Nutrition. Third edition. New York: Macmillan Co., 1926.
10. Coward, K. H. The persistence of vitamin A in plant tissues. *Biochem. J.* **19**, 500–506 (1925).

THE FIELD OF RESEARCH ON THE ECONOMIC AND SOCIAL PROBLEMS OF THE HOME

CHASE GOING WOODHOUSE

Chairman, Section of the Economic and Social Problems of the Home, American Home Economics Association

(*Continued*)

The titles of researches have been classified according to the tentative outline of the field of research in the economic and social problems of the home. When a study covers more than one sub-head, the title is listed immediately under the main head. Those which apply more specifically to a sub-head follow under the pertinent sub-head. Studies being made under the auspices of home economics departments or under the Purnell Act are specifically so marked, as are also Ph.D. and M.A. theses.

It is interesting to note the relatively large number of researches dealing with some phase of the standard of living. But it should be further noted that of the studies covering specific items of the family budget none touch the sub-heads, development and personal, and that there is only one study on savings. No studies on national consumption are reported and very few touching upon qualitative analyses of the standard of living and upon community factors and facilities as they influence the standard of living. The studies on method are all being made either on Purnell funds or in the United States Bureaus of Home Economics and of Agricultural Economics.

Household production is being studied in 23 projects, but only two of them deal with the transfer of production from the household to outside agencies. Little attention is being given to the management of family wealth and income.

The new interest in family relations is clearly indicated by the reporting of 60 projects, some of which will result in more than one study. Apparently most work is being done on the home environment as a whole, especially as it influences certain behavior problems. Studies bearing on the family but distinctly dealing with psychological or psychiatric rather than economic and social phases have been omitted. Of course the difficulty of drawing the dividing line and the close relation of these studies to those listed is recognized. Another topic of prominence is the entry of married women into paid work and outside interests, eight researches being listed under this head.

The list of titles of researches on the economic and social problems of the home is given below. It is hoped that any omissions will be brought to the attention of the chairman.

A. I. a. 1. Black, Alberg Gain, Minnesota. Wealth and income of the farmers of the United States. (Ph.D.)

Palmer, Edgar Z., Wisconsin. The comparative trend of incomes of economic classes. (Ph.D.)

A. I. a. 5. Novotny, J. M., Pennsylvania. The taxation of earned incomes. (Ph.D.)

Simons, Henry Calvert, Jr., Chicago. The economics of income taxation. (Ph.D.)

A. I. b. Takizawa, Matsuyo, Columbia. The economic development and the changes in the family system in Japan. (Ph.D.)

A. I. c. 1. Cave, Ray Clinton, California. Social stratification and market prices. (Ph.D.)

A. I. d. 1. Ramberg, William Henry, Northwestern. A study of life insurance from the standpoint of the insured. (Ph.D.)

A. II. a. Setterlund, Elmer L., Chicago. A study of the Protestant churches in the apartment-house area of the urban environment. (Ph.D.)

B. I. a. 1. Hawley, Edith, U. S. Dept. Agriculture, Bureau of Home Economics. A comparison of food consumption studies where the data is secured by the accounting and by the survey method from farm families, industrial families, and professional and business families.

Woodhouse, Chase Going, U. S. Dept. Agriculture, Bureau of Home Economics. A comparison of the results obtained from standard of living studies based on data obtained by the survey and by the household account-book method from farm families, industrial families, and professional business families.

B. I. a. 2. Clark, Edna, U. S. Dept. Agriculture, Bureau of Home Economics. Expenditure scaled for clothing by sex and age for members of farm families.

Hawley, Edith, U. S. Dept. Agriculture, Bureau of Home Economics. A short-cut method for calculating the nutritive value of the diet in standard of living studies.

Dietary scales and standards for measuring a family's nutritive needs. Published June, 1927, Technical Bulletin No. 8, U. S. Dept. Agriculture.

A study of the quantitative and qualitative methods now in use in studying the diet as it relates to state of nutrition.

Jensen, C. W., South Carolina Experiment Station. Measuring purchasing power of farmers. (Purnell)

Purves, C. M., U. S. Dept. Agriculture, Bureau of Agricultural Economics. Index number of prices of commodities farmers buy; the construction of an index showing changes in living expenses since 1910 and the development of a method of continuing it into the future.

Williams, F. M., Home Economics, Cornell. Index number of money cost of living in small towns and on farms in New York State. (Purnell)

Woodhouse, Chase Going, U. S. Dept. Agriculture, Bureau of Home Economics. Expenditure scales by sex and age for expenditures of members of farm families on items other than food and clothing.

B. I. b. 1. Mumford, E., and Cawood, M., Michigan State College. The needs of farm homes. (Purnell)

Zimmerman, C. A., College of Agriculture, Minnesota. Social constituents of rural homes in Minnesota.

B. I. c. 1. Anderson, W. A., North Carolina State College. Standard of living of farm families. A survey of three hundred farm families owning their farms, and daily records of expenditures, receipts and use of time from about 30 of these same families. (Purnell)

Andrews, B. R., Household Economics, Teachers College, Columbia University. Room and board costs of employed young women in New York City.

Brooks, C. P., Home Economics, Vermont. A study of farm family expenditures. (Purnell)

Clapp, Elizabeth, Storrs Agricultural Experiment Station, Connecticut. Standards of living on Connecticut farm homes. (Purnell)

Hoyt, Elizabeth E., and Coit, Mary C., Home Economics, Iowa State College. Standard of living on Iowa farms based on account-books kept by the families and personal contact with 50 farm families. (Purnell)

Kirkpatrick, E. L., U. S. Dept. Agriculture, Bureau of Agricultural Economics. A study of the farm business and family living of families in selected marginal farm areas.

Lively, C. E., and Lanman, Faith R., Rural Sociology and Home Economics, Ohio State University. A study of the cost of family living in relation to income, size of family, size of farm business and other factors. To serve as guide in choice of future research projects related to the farm home. (Purnell)

Muse, Marianne, Home Economics, Kansas State Agricultural College. A study of expenses and receipts of Kansas farms. This study covers three counties typical of wheat, dairying, and diversified farming, investigation of expenses and receipts, farm, household and personal by the month for five years in two counties and two years in the other.

Peixotto, Jessica B., California. Quantity and cost estimate for family of four on $5,000 a year at a professional standard. Mimeographed, July, 1927.

Income and expenditure of 98 street-car men's families.

Annual quantity and cost elements for wage earner, clerk, and professional man.

Rankin, J. O., Nebraska. Cost and standards of living on Nebraska farms. (Purnell)

Studley, Lucy A., Home Economics, Minnesota. A quantitative and qualitative study of farm homes in Minnesota with emphasis upon the influence of the farm upon the management of the home and the life of the family. (Purnell)

Zimmerman, C. C., and Black, J. D., College of Agriculture, Minnesota. Rural living in Minnesota. (Purnell)

Living of successful farm families in Minnesota.

Factors affecting farmers' cash expenditures.

B. I. c. 2. Abbott, O. D., Home Economics, Florida College of Agriculture. A study to determine the apparent prevalence of nutritional diseases in rural school children between the ages of six and twelve years in five representative counties in Florida. (Purnell)

Brown, A. P., Home Economics, Agricultural College of Utah. Food habits of Utah families. (Purnell)

Davies, E. S., Home Economics, Massachusetts Agricultural College. Food consumption of school children in relation to health. (Purnell)

Dickins, D., Home Economics, Mississippi Agricultural & Mechanical College. A study of the food habits of people in two contrasting areas in Mississippi. (Purnell)

Food consumption and expenditures for food of negro tenants in the Yazo-Mississippi Delta. (Purnell)

Hale, Wealthy and Marlatt, A. L., Home Economics, Wisconsin. Studies of food expenditure of farm families in Wisconsin. A study of the actual expenditures for food by selected farm families in Wisconsin. This in-

cludes not only the food purchased but the food produced on the farm and used by the farm family. (Purnell)

Hawley, Edith, U. S. Dept. Agriculture, Bureau of Home Economics. The amount, nutritive value, and money value of food consumed by farm families. Consumption figures of food purchased and provided by the farm collected by the survey and by the account-book method, analyzed to ascertain the adequacy of the diet of the individual family together with the amount it represents in money.

Jensen, K., and Talbott, M. W., Home Economics, Idaho College of Agriculture. Food consumption and food expenditures of farm families in relation to standards of requirement and income. (Purnell)

McKittrick, E. J., Home Economics, Wyoming College of Agriculture. A study of food expenditures and consumption of farm families. (Purnell)

Mathews, S. J., Home Economics, Georgia State College. Food habits of Georgia rural people. (Purnell)

Nesbitt, Nell, Home Economics, West Virginia College of Agriculture. Food consumption and expenditure of farm families. A study of food habits in farm homes in West Virginia. (Purnell)

B. I. c. 2.

Peixotto, Jessica B., California. Quantity and cost study of food consumption and home operation.

Rankin, J. O., Nebraska. Feeding the Nebraska farm family. (Purnell)

Reynolds, E. A., Home Economics, Virginia Agricultural & Mechanical College. An investigation of food expenditures and dietary standards of rural families in Virginia. (Purnell)

Williams, F. M., and Lockwood, J., Home Economics, Cornell. Food consumption of farm and village families; a study in consumers' demands. (Purnell)

B. I. c. 3.

Evans, G. H., Jr., Johns Hopkins. Apartment rental in Baltimore. (Ph.D.) Completed.

Rankin, J. O., Nebraska. Housing the Nebraska farm family. (Purnell)

Reich, Max, New York University. The effects of the real estate situation in New York City upon the family. (M.A.)

Reynolds, Ellen A., Home Economics, Virginia Agricultural & Mechanical College. The relation of housing to the health of the family in rural homes. (Purnell)

Zimmerman, C. C., and Adams, J. Q., College of Agriculture, Minnesota. Rural housing in Minnesota.

B. I. c. 4. Clark, Edna L., U. S. Dept. Agriculture, Bureau of Home Economics. Analysis of clothing expenditures of farm families.

Fernandes, Grace, Home Economics, Oklahoma Agricultural & Mechanical College. The farm woman's part in establishing the economic status of the family by her standard of management, with special reference first to clothing. (Purnell)

Rankin, J. O., Nebraska. Clothing the Nebraska farm family. (Purnell)

B. I. c. 5. Peixotto, Jessica B., California. Quantity and cost study of food consumption and home operation.

B. I. c. 7. A group of Simmons College School for Social Work students. The care of the chronic sick in their own homes. Study of 750 records of the Boston Community Health Association.

Sanderson, Dwight, New York State College of Agriculture. A study of sickness in three townships in Cortland County, New York.

A study of sickness in farm and village homes for a year; nature, cost, medical service, etc.

B. I. c. 11. John, Mildred, Women's Educational and Industrial Union, Boston. A study of some 5,000 application records of two neighborhood credit unions which make loans to meet family emergencies. (M.A.)

B. I. e. 4. Bowen, Ezra, Columbia. Population and the standard of living. (Ph.D.)

B. I. e. 5. Clark, Edna L., U. S. Dept. Agriculture, Bureau of Home Economics. Suggested clothing budgets for farm families.

Ford, Gertrude C., Washington. A comparative study of the cost of living and the standards of living in their relation to social progress as indicated by such facts as education, birthrate, death-rate, and other items. (M.A.)

B. I. f. 3. See B. I. c. 7.

B. I. f. 5. Ford, James, Better Homes in America, Washington, D. C. Enforcement of housing legislation in cities over 100,000.

B. II. a. 2. Olsen, Anne Loriane, Dept. of Household Science, California. Seasonal distribution of fruits and vegetables in California and its significance to the consumer. (M.A.)

Jefferson, Lorian P. Massachusetts Agricultural College. A study of consumer-demand for apples.

B. II. a. 3. Wood, Mildred Weigley, Phoenix, Arizona. Cost of food at service and non-service stores. A comparison of prices at cash-and-carry and at service stores to see what saving is effected over a period of years for a definite family. (Based on records for three years.)

B. II. b. 3. Judy, Helen E., Household Economics, Teachers College, Columbia. Buying for the home—who does the purchasing. A study of 60 families.

B. III. a. Comegys, Eva, Home Economics, Chicago. The protection of the consumer under the Federal Trade Commission Act. (M.A.)

B. III. c. Cook, Rosamond, Home Economics, Cincinnati. Standardization of sheeting. Advertising from the point of view of the consumer.

Doubman, John Russel, Pennsylvania. An analysis of display advertising in Philadelphia newspapers to determine its expressed truth or falsity. (Ph.D.)

B. IV. De Chazeau, Melvin Gardner, Harvard. Consumer's surplus and consumer's satisfactions. (Ph.D.)

Holmes, Parker Manfred, Northwestern. Consumer-demand. (Ph.D.)

Pryor, Margaret, Wisconsin. A study in consumption. (Ph.D.)

Schnitzer, Blanche, Columbia. The psychology of consumers' demand. (Ph.D.).

C. I. a. Arnquist, Inez J., and Harrison, F., Home Economics, State College of Washington. Present use of time by the farm homemaker in typical agricultural communities, wheat, dairy, poultry, and fruit. (Purnell)

Brossard, Laura, U. S. Dept. Agriculture, Bureau of Home Economics. Time spent in the care of infants.

Frayser, Mary E., Home Economics, South Carolina Experiment Station in cooperation with Winthrop College. A study of leisure and how farm families use their leisure in South Carolina. A study of 400 homes in 4 counties. (Purnell)

Gray, Greta, Home Economics, Nebraska. Routine and seasonal work of the housekeeper. (Purnell)

Kneeland, Hildegarde, U. S. Dept. Agriculture, Bureau of Home Economics. Use of time by homemakers.

Thaden, J. F., Michigan State College. Use of leisure time. (Ph.D.)

Whittemore, Margaret, Home Economics, Rhode Island State College. Use of time by rural homemakers. (Purnell)

Wilson, M., Home Economics, Oregon State College. Present use of time by farm homemakers. (Purnell)

Zimmerman, C. A., College of Agriculture, Minnesota. Other than housekeeping functions of Minnesota farm women.

C. I. b.

Adams, Ira G., Minnesota. Rural housing in Minnesota. (M.A.)

Allen, Edith, American University. The effects of economic and social changes on the American house. An historical study of the effects of various developments on the plan and arrangement of the dwelling place. (Ph.D.)

Bacon, Elizabeth Mickle, Radcliffe. The growth of household conveniences in the United States since the Civil War. (Ph.D.)

Beard, Belle Boone, Bryn Mawr. Electricity in the home. A report based on 125 home interviews.

Coffin, Margaret, Home Economics, Maryland. Housing in relation to farm labor turnover. Personal interviews with 600 farm women in three typical counties. (Purnell)

Davison, E., Home Economics, Iowa State College. The application of electricity in the farm home. (Purnell)

Gray, Greta, Home Economics, Nebraska. Water carried for household purposes. Lighting with portable lamps. The Nebraska rural kitchen. Kerosene cooking stoves. (Purnell)

Halbert, Blanche, Better Homes in America, Washington, D. C. Boy built houses and methods of training for better housebuilding. A study of 106 houses built by school boys.

Hines, Mrs. Wilkie L., Home Economics, Rhode Island State College. Rhode Island homemaker's use of electrical labor saving equipment.

Huskins, E., Home Economics, South Dakota State College, Use of labor saving devices in preparation of meals. (Purnell)

Johnson, Madge, Home Economics, in cooperation with D. C. Carter of the Department of Agricultural Engineering, Arkansas. Basic factors in farm homes planning. Survey of 515 farm homes in typical sections of Arkansas to determine basic best all-round interests of the family. (Purnell)

Rapp, M., Home Economics, Purdue. Fuels for cooking purposes in rural homes. (Purnell)

C. II. a.

Kneeland, Hildegarde, U. S. Dept. Agriculture, Bureau of Home Economics. Economic value of homemaker's time.

Comparison of time and money costs of task when done by homemaker and by paid worker or another agency, from records kept by homemaker.

C. III. Norton, Alice P., Institute for the coordination of women's interests, Smith College. Cooked food supply experiments in America. (Published)

D. III. Kay, Helen B., Household Economics, Teachers College, Columbia. Money and property experiences of school children. (In MS.) (M.A.)

D. IV. Woodhouse, Chase Going, U. S. Dept. Agriculture, Bureau of Home Economics. Methods and forms for planning and recording family expenditures.

D. V. Armstrong, Rhandena, A. R., Household Economics, Teachers College, Columbia. An analysis of instalment purchase accounts in a department store. (M.A.)

E. I. a. Feldman, Pauline Ruth, Columbia. The size of families of graduates of certain colleges for women. (M.A.)

Monroe, Day, and Kyrk, Hazel, Home Economics, Chicago. The Chicago Family. A study of the 1920 census data.

E. I. b. Leyburn, James G., Yale. The frontier family. (Ph.D.)

Meroney, W. P., Baylor. Case studies of the modern family.

Rhyne, Jennings J., North Carolina. A case study of 500 mill village families. (Ph.D.)

E. I. c. Camblon, Ruth S., Smith College School for Social Work. Mexican Parents. A study of their adaptation to American standards and culture, especially in relation to child training. (M.S.S.)

Giffen, Naomi, Chicago. Differences in the lives of men and women in Eskimo society. (M.A.)

Gray, Harold S., Harvard. A study of the family in China. (Ph.D.)

Shyev, Lucille, Smith College School for Social Work. A study of 40 problem children of Sephardic extraction. (M.S.S.)

Towne, Helen L., Northwestern University. The life of the gypsies. (M.A.)

(*To be continued*)

BOOKS AND PERIODICALS

NEW BOOKS

Nutritional Physiology. By PERCY GOLDTHWAIT STILES. Sixth Edition. Philadelphia: W. B. Saunders, 1928, pp. 311, $1.50.

A standard text book for students familiar with elementary science; now slightly changed from the thorough revision made in 1924 and noted in the JOURNAL OF HOME ECONOMICS for 1925, volume 17, page 227.

Food Infections and Food Intoxications. By SAMUEL REED DAMON. Baltimore: The Williams & Wilkins Company, 1928, pp. 266, $4.00.

A bringing together of widely-scattered facts on the etiology, symptomatology, diagnosis, treatment, and prophylaxis of the important forms of food poisoning, by an associate professor of bacteriology in the School of Hygiene and Public Health, Johns Hopkins University; valuable as a reference book for various groups of specialists, including nutrition experts.

A Textbook of Bacteriology and its Applications. By CURTIS M. HILLIARD. Boston: Ginn and Company, 1928, pp. 329, $2.80.

A presentation by a professor of biology and health at Simmons College of "the fundamental concepts of biology and its most important practical applications, such as might be readily covered within the usual college semester." The student of household economics has been kept primarily in mind in determining the emphasis placed on the various topics discussed, though in the opinion of the author the arrangement is that best suited to introductory bacteriology for any group of students.

Growing Up. The story of how we become alive, are born and grow up. By KARL DE SCHWEINITZ. New York: The Macmillan Company, 1928, pp. 111, $1.75.

A carefully written, attractive book by a well-known social worker who believes that "sex education is not so much a matter of words as of attitude," presenting the facts of birth and growth in a way which he hopes will be wholesome for children and helpful to parents, especially when it "confirms a point of view already revealed by the parents and the life of the home." Analogies from plant and animal life are used to lead up to human reproduction, which is treated without either mystery and prudishness or undue emphasis on biological detail. Most of the illustrations are skillfully-selected, beautiful pictures of flowers, insects, eggs, animals, and babies, though there are a few diagrammatic or microscopic drawings to explain fertilization and uterine growth. Unusually successful in combining frankness and delicacy.

Feeding the Child from Two to Six. By MARY FRANCES HARTLEY BARNES. With introduction by Richard M. Smith. New York: The Macmillan Company, 1928, pp. 206, $2.50.

A simple statement of the principles of child feeding and suggestive menus for a year with directions for their preparation, brought together for the intelligent but untrained mother or nurse by a former dietitian in camps for little children.

The Children's Reading. By FRANCES JENKINS OLCOTT. Revised and enlarged edition. Boston: Houghton Mifflin company, 1927, pp. 427, $2.00.

Perhaps the standard guide for the general selection of children's books; by an experienced librarian and editor of such books; first published in 1912 and now brought up to date. The body of the book consists of helpful discussions of books and reading of various kinds, each with an annotated list, while the appendix gives suggestions for procuring books through the public library

and by purchase and a purchase list of children's books arranged by authors with references to the annotations in the body of the book.

Fur Truths. The story of furs and the fur business. By ABRAHAM GOTTLIEB. New York: Harper & Brothers, 1927, pp. 105, $3.00.

A volume by an experienced fur manufacturer and dealer which covers much the same ground as the articles which appeared in the JOURNAL OF HOME ECONOMICS in 1927, but with somewhat more detail and including a "fur dictionary," a list of trade names of furs dyed in imitation of more expensive kinds, and eighteen attractive pictures, mostly of fur-bearing animals.

Why Stop Learning? By DOROTHY CANFIELD FISHER. New York: Harcourt, Brace and Company, 1927, pp. 301, $2.00.

Familiarity with educational ideas, power of independent thought, and literary ability which has placed the writer among our most successful novelists here combine to make a book likely to give much stimulus to the movement for adult education in the United States. Typical chapter titles are "Correspondence schools," "Women's clubs," "Parents as students," "Workers education," "Museums," "Everything else," and "Some last guesses."

A Syllabus on Vocational Education. By VERL A. TEETER. With an introduction by P. P. CLAXTON. New York: The Macmillan Company, 1928, pp. 217, $1.00.

An outline for high school study of occupations and vocational preparation, with references to books and periodicals on each subject. The chapter on homemaking mentions cooking, dressmaking, hairdressing, housekeeping, and millinery. The five references given under the profession of dietetics are none of them to books or articles dealing specially with any phases of institution management or hospital dietetics. The more general lists might prove suggestive to persons wishing to familiarize themselves with the type of material used in vocational guidance.

China: A nation in evolution. By PAUL MONROE. New York: The Macmillan Company, 1928, pp. 447, $3.50.

An internationally known educator who has been familiar with China and the Chinese people since 1913 and whose disinterested service to Chinese education is widely recognized in that country here attempts to "outline a simple statement of the complex Chinese puzzle" for the benefit of "average Americans" desirous of getting the essential facts in unprejudiced and readable form. Suitable for members of college home economics clubs especially interested in China who seriously wish to inform themselves regarding the causes and present condition of Chinese life and institutions.

Economic History of the United States. By HAROLD UNDERWOOD FAULKNER. New York: The Macmillan Company, 1928, pp. 301, $1.50.

A volume from "The World Today Bookshelf" which is intended to provide short, readable, but scholarly discussions of of the meaning of present conditions. To home economists this volume is interesting in that the historical facts, most of them familiar, are selected and restated to show the development of economic rather than political life and institutions.

Marionettes, Masks, and Shadows. By WINIFRED H. MILLS and LOUISE M. DUNN. Illustrated by Corydon Bell. Garden City, New York: Doubleday, Page & Co., 1927, pp. 270, $3.50.

The history, technique, and practical possibilities of marionette, mask, and silhouette plays delightfully described by two women who know by experience whereof they speak, and whose account is likely to inspire many a school girl and boy to try these charming and not too difficult forms of artistic expression. There are excellent suggestions on costume making. Illustrations and bookmaking are worthy of the text.

ABSTRACTS FROM PERIODICALS

CHILD DEVELOPMENT AND PARENTAL EDUCATION

EDUCATIONAL METHODS

Pechstein, L. A. Responsibility, adolescence, and the school. *Child Study*, **5**, Jan. 6–8 (1928).

Some of the ways by which the high school may train youth for responsibility are discussed, including socialized procedure in the classroom, organizing the school community, student government, vocational and social activities, educational and vocational guidance, and moral guidance. When students, together with their teachers, may plan, choose, executive, and evaluate, personalities of vigor and fineness are developed.

Worlton, J. T. The effect of homogeneous classification in the scholastic achievement of bright pupils. *Elementary School J.* **28**, 336–345 (1928).

Experimental evidence is reported to show that better results follow homogeneous than heterogeneous groupings.

Brodie, Mabel G. The practical teaching of mothercraft. *Hosp. Soc. Service*, **17**, 55–61 (1928).

Suggestions for increasing the usefulness of the welfare center, especially in adult education.

Kefauver, Graysen N. The relative influence of fatigue on pupils with different levels of mentality. *J. Educ. Psychol.* **19**, 25–30 (1928).

Data are presented to show that fatigue influences equally the speed of work of bright and dull children, though its influence is greater in the case of bright children. That fatigue can be partly removed by a challenging stimulus was shown by the fact that a 20-minute play period counteracted the fatigue of two hours of continuous work. The influence of fatigue on the scores for speed of work was larger than on the average of scores obtained from a variety of tests.

Lincoln, Edward A. The reliability of the Stanford-Binet scale and the constancy of intelligence quotients. *J. Educ. Psychol.* **18**, 621–626 (1927).

When 30 six-year-old children were given two Stanford-Binet examinations with a four-hour interval, the reliability coefficients in mental age and intelligence quotient were both 0.95. Gains, both in M. A. and I. Q., were more numerous than losses. Consistency of performance varied considerably. In spite of the high degree of reliability it is significant than in 10 per cent of the cases, the I. Q. varied by 8 points.

Twitchell, Doris F. The attitude of universities and colleges towards the problems of childhood. *J. Educ. Research*, **17**, 30–44 (1928).

An analysis of the type and extent of the study of child problems, determined by examination of the catalogues of 150 colleges. Sixty-eight per cent gave at least one course in child problems, 55 per cent one in child psychology, 13 per cent one in child welfare, 8 per cent one in psychology of elementary education. The average number of courses offered is 1.8 and the number of credit hours given 2.8. Laboratory work is provided in 8 per cent of the institutions. Eighty-eight per cent of the women's colleges, 73 per cent of the co-educational colleges, and 19 per cent of the men's colleges studied offer courses in this field. Courses in child psychology and child care are most common in women's colleges, those in child welfare and educational psychology most common in co-educational colleges, with the two types of institutions equal as regards courses in elementary educational aims. Men's colleges fall far behind, giving courses only in child psychology and child welfare. This is considered far out of proportion to the comparative influence of men and women on child development. The need of more extensive courses in child study problems and of laboratory work in them is obvious.

Wile, Ira S. Growth in understanding children. *J. Natl. Educ. Assocn.* **17,** 43–44 (1928).

A plea that the child be recognized as a psycho-biologic unity and his teachers and the school curriculum be made to understand his nature and his needs.

HABIT TRAINING AND BEHAVIOR PROBLEMS

Aldrich, C. A. A new test for hearing in the new-born. *Am. J. Diseases of Children,* **35,** 36–37 (1928).

The author reports that a conditioned reflex with sound as one stimulus and pain as the other was successfully built up in a child in whom deafness was suspected, thus establishing proof of normal hearing when other tests had failed, and that an extension of the use of the conditioned reflex in the investigation of sensation in the newborn is to be undertaken.

Sherman, Mendel. The differentiation of emotional responses in infants. I. Judgments of emotional responses from motion-picture views and from actual observations. *J. Comp. Psychol.* **7,** 265–284 (1927). II. The ability of observers to judge the emotional characteristics of the crying of infants, and of the voice of an adult. *J. Compt. Psychol.* **7,** 335–351 (1927).

Much greater lack of agreement was found in differentiating and naming the reactions of young infants as seen both in motion pictures and in real infants when the stimuli were unknown to the observers, than when the stimuli were also seen. Again, when cries only were heard there was a wide dispersion of judgments as to the emotional characteristic exhibited, but when the stimulus was known to the observers the judgments were such as would be expected from it. The sharpness and duration of the cry was found to depend upon the intensity of the stimulus; a sudden forcible stimulus gave a louder and higher pitched cry and the longer the duration of stimulus, the more intense the cry. There was wide dispersion of judgments as to the emotional character of the voice of a trained vocalist, except when sorrow and anger were expressed.

Stutsman, Rachel. Irene, a study of the personality defects of an attractive superior child of pre-school age. *Ped. Sem. & J. Gen. Psychol.* **34,** 591–614 (1927).

An interesting study of a child with two pronounced personality defects, unwillingness to face the issue and an attitude of personal infallibility and severity in judgments of others, which two years of special effort on the part of the nursery school were only partially successful in altering.

HOME AND FAMILY RELATIONSHIPS

Pipel, Cécile. Training for responsibility in the home. *Child Study,* **5,** Jan. 9–11 (1928).

Responsibility implies maturity and is based upon initiative, self-reliance, affection, and concern for society. These qualities may be cultivated early in the home through opportunity to explore, experiment, and experience. Responsibilities are to be given gradually with opportunity to face and work out difficult personal situations. The attitude of the parents toward their own problems is the strongest influence on the child's attitudes.

MENTAL HYGIENE

Johnson, Harriet M. Responsibilities for the young child. *Child Study,* **5,** Jan. 3–5 (1928).

The author believes that to expect of a child all that he is physiologically able to do without strain, while his interest is held and he feels the satisfaction of his own accomplishment rather than adult approval, will develop more reliable and lasting facility in self-help than will intensive training and demands for consistently adequate performance in routine habits.

McCord, Clinton P. Psychiatry and the school program. *Hosp. Soc. Service,* **17,** 11–18 (1928).

The school should provide study and treatment to insure the child the optimum adjustment to life. The minimum working unit

should include a psychiatrist versed in psychology and education, a psychologist with the clinical viewpoint, a psychiatric social worker or trained visiting teacher, and secretarial help.

Blatz, W. E. and Bott, E. A. Studies in mental hygiene: 1. Behavior of public school children—a description of method. *Ped. Sem. & J. Genetic Psychol.* **34,** 552–582 (1927).

Preliminary reports on an interesting five-year project, one aim of which is to enumerate and evaluate objectively the behavior of children in a large public school from a representative district. Forms, records, and methods of classifying misdemeanors as drawn up by research workers and teachers are presented. The frequency of occurrence of these types of misdemeanors for eight grades are given. They show no close relationship between frequency and chronological age, although the greatest frequency occurs between seven and nine years, and varies inversely to the I. Q. with boys but not with girls. The number of misdemeanors is greater for boys than girls and falls markedly in the higher grades, but at different rates for the various misdemeanors. Data obtained during succeeding years are to be studied in the same way.

Chadwick, Mary. Six months' experiment at nursery school. *Psychoanalytic Rev.* **15,** 27–36 (1928).

Report of an attempt by an English psychiatrist to discover through observations of young children at the age when neuroses or neurotic characteristics are found to have started, whether repressions are active, what part is played by parents in these cases, the influence of one-child families, that of children upon teachers and teachers upon children; and to give immediate help in problems presented. Various types of family handicaps are discussed and a note added on the development of the super ego.

The new "child guidance" council. *Times* [London] *Educ. Supp.* **653,** p. 493 (Nov. 5, 1927).

A child guidance council has recently been formed in London "to advance the treatment of difficult, delinquent, or maladjusted children throughout Great Britain by careful study of each individual case, in clinics staffed by psychiatrists, psychologists, and specially trained social workers." The Commonwealth Fund is giving generous financial aid to the work and has made provision for a considerable number of the council and staff to visit America to observe clinics in operation and to study intensively.

Myrick, Helen L. Child Care. *Welfare Mag.* **18,** 1638–1642 (1927).

An application of the principles of mental hygiene to the child placed in a foster home.

PHYSICAL CARE AND DEVELOPMENT

Rogers, James F. Present status of school hygiene in the United States. *Am. J. Public Health,* **18,** 53–65 (1928).

A survey of the accomplishments under ten years of "health education," with suggestions for future developments.

Bartlett, Walter M. An analysis of anorexia. *Am. J. Diseases of Children* **35,** 26–35 (1928).

Anorexia the persistence of which has resulted in evident malnutrition may be organic, resulting from infection, or functional with no organic cause. In a series of case studies by the writer, 35 per cent were of the functional type. These were treated by three different methods: daily administration of saccharated iron, daily administration of cod liver oil, and introduction of liver, beefsteak, and kidney into the diet at least three times a week. Judged by increase of weight, the most reliable objective criterion, the third method gave the most striking results and was considered the most efficient and reliable. The suggestion is made that the liver may act as a specific stimulant to the appetite.

Wile, Ira S. Physical problems of abnormal behavior. *Am. J. Diseases of Children* **35,** 113–119 (1928).

A discussion of the interrelation of the structure and function of the physical being and its influence upon the total behavior of the individual.

Stanley, Louise. The place of nutrition in childhood education. *Childhood Educ.* **4**, 269–273 (1928).

Now that information is available as to what constitutes satisfactory diet, the problem is to lead the child to practice sound food choice and habits, and in this the school can do much to establish right attitudes.

White, Edna N. Preschool health problems. *Childhood Educ.* **4**, 279–282 (1928).

A presentation of the part to be played by parents and specialists in a program of positive health for children, with brief reference to some of the cooperative methods employed at the Merrill-Palmer School.

Perrin, Ethel. Healthful recreation. *Childhood Educ.* **4**, 283–287 (1928).

Meeting the needs of the individual child and providing suitable hygienic conditions are considered essentials of healthful recreation, while the most valuable games are said to be those which demand both the use of the big muscles and self-direction on the part of many participants.

Heminway, Roberta. Games for kindergarten, first and second grades. *Childhood Educ.* **4**, 288–291 (1928).

Typical games described and classified in three groups: those primarily active, those involving surprise, those largely dramatic.

Lincoln, Edith M. The health program of the City and Country School of New York City. *Childhood Educ.* **4**, 293–299 (1928).

An account of the five-year constructive health program of a private school in which more than a third of the children are under six years old, which resulted in a reduction from 13 to 10.1 per cent of days lost because of illness. As a result of the health measures used a comparatively small amount of the time lost is because of contagious diseases.

Coble, Margaret. The health program in the Parker School District. *Childhood Educ.* **4**, 300–301 (1928).

A description of methods used in a public school system which reaches five thousand children in Greenville, South Carolina.

Veeder, Borden S. Importance of bringing the child to school in good health and keeping him in good health during school life. *Hosp. Soc. Service*, **17**, 68–74 (1928).

The author holds that since physical and mental development are of equal importance to the child as equipment for the constant adjustments demanded by life, it is as important to send a child to school well and keep him so during his school life as it is to send him to school at all.

Cattell, Psyche. A scale for measuring dental age. *School and Soc.* **27**, 52–56 (1928).

Three scales which show the number of teeth erupted at each age for boys and for girls together with dentition age norms, and dentition quartile deviations and percentiles for different ages are presented and interpreted.

Children's headaches. *Times* [London] *Educ. Supp.* **655**, 525 (Nov. 19, 1927).

At a meeting of the British Psychological Society, Dr. Inman, an ophthalmic surgeon, stated that although 75 per cent of all eyes are sufficiently out of focus to justify glasses, few cause headaches and no relation exists between the degree of error of refraction and the degree of resulting headache. Among 40,000 children examined, 60 to 70 per cent complained of headache, in most cases associated with disturbed sleep, fears, and nervous twitchings. Glasses might relieve the headache but leave untouched the anxiety neurosis behind it. The psychological state of the sufferer from eye symptoms must not be neglected. Dr. Harmon expressed the opinion that headache might develop when extreme concentration was required, that bad light was the great cause of eye strain. It was brought out that eye coördination is normally acquired at two and a half years, but that if worry or fright or possibly eye strain interferes the power of forming the habit may be lost, with squint as a result; and also that left-handedness is often associated with squint.

H. R. H.

NUTRITION

Dick, G. F., and Dick, G. H. The bacteriology of dried powdered milk preparations used in infant feeding. *Am. J. Diseases Children* **34**, 1040, 1041 (1927).

An epidemic of enteritis in an institution in which infants received artificial feedings composed largely of dried protein milk led to a bacteriological examination of several preparations of dried milk, including protein, whole, and modified milk. In all of the samples examined, living bacteria, including streptococci, were found, indicating that the methods of manufacture do not destroy bacteria which may be present in the milk and that the preparation of powdered milk feedings without boiling or pasteurization allows the bacteria in the powder to persist in living form in the feeding.

Bauman, L. Obesity: recent reports in the literature and results of treatment. *J. Am. Med. Assocn.* **90**, 22–24 (1928).

A brief review and discussion of the literature on the specific dynamic action of protein in obesity and the changes in basal metabolism during overfeeding is followed by a description of the organization and operation at the Presbyterian Hospital, New York City, of an ambulatory clinic for obese patients; the treatment consisting of a low caloric diet, exercise, and thyroxin in selected cases. The apportionment by meals of the daily food allowance (furnishing about 100 gm. of carbohydrate, 70 of protein and 60 of fat) and statistics of the results obtained in the clinic to date are included.

Moore, C. U., Brodie, J. L., and Hope, R. B. Some effects upon the young of inadequate diets. I. Polyneuritis and hemorrhages. *Am. J. Physiol.* **82**, 350–357 (1927).

The authors describe a condition of polyneuritis accompanied by subcutaneous and internal hemorrhages in suckling rats when the maternal diet contained 2 per cent of yeast-foam tablets as the sole source of vitamin B. As in a recent study by Sure (See J. HOME ECON. **20**, 53) the vitamin preparation was used more effectively by the young; in the few which survived long enough to begin to eat the experimental diet complete recovery took place.

Bradfield, H. S. The determination of the surface area of women and its use in expressing basal metabolic rate. *Am. J. Physiol.* **82**, 570–576 (1927).

From calculations by various standard methods of the surface area of 477 young women students at the University of Missouri and from determinations of the basal metabolism of 16 of the subjects selected as representing different types of stature, the author has concluded "that the Krogh modification of the Aub-Du Bois standards should be used for prediction of basal metabolism of women; that if the Du Bois height-weight formula is used to calculate surface area of women, a correction of +2 per cent should be made; and that the maximum error in applying a formula to women even after such a correction is made is ±7 per cent instead of ±5 per cent, the error predicted for men. About 70 per cent of the cases studied would fall within ±3 per cent and about 95 per cent within ±5 per cent."

Beard, H. H. The protein intake of medical students. *Am. J. Physiol.* **82**, 577–579 (1927).

From data obtained in analyses of 400 twenty-four-hour samples of urine of male medical students at Western Reserve University, Cleveland, Ohio, the average daily protein intake has been calculated as 76.7 gm. per 70 kg. body weight. Since the study was made in the months of January from 1922 to 1927 inclusive, in which the monthly mean temperature ranged between 24 to 30.2°F., the results are thought to refute the conclusions of investigators at Tulane University, New Orleans, that a correspondingly low protein intake of students there was due to higher temperatures of the South.

Whipple, G. H., and Robscheit-Robbins, F. S. Blood regeneration in severe anemia X. Assimilation and conservation of bile

pigment, blood hemoglobin and muscle hemoglobin. *Am. J. Physiol.* **83**, 60–75 (1927).

Robscheit-Robbins, F. S., and Whipple, G. H. Blood regeneration in severe anemia XI. Iron effect separated from organ effect in diet. *Am. J. Physiol.* **83**, 76–83 (1927).

In the first of these two papers continuing the series of studies previously noted in J. HOME ECON. **19**, 651 (1927), it is reported that dogs rendered anemic by bleeding are able to utilize as much as 80 to 90 per cent of blood hemoglobin introduced intraperitoneally or intravenously but only from 5 to 20 per cent by mouth. Muscle hemoglobin when given intravenously was not well tolerated but was utilized to a slight extent. Bile pigments were not utilized.

The second paper deals chiefly with the present confusion in the field of experimental anemia. This is attributed chiefly to differences in the experimental conditions in the various studies reported, particularly the use of different species of animals and different methods of producing the anemia. The extent of utilization of iron salts is thought to depend upon the actual shortage of iron at the time of feeding, and upon the use of other materials which apparently aid in the assimilation of the iron. Data are reported showing that the amount of hemoglobin regenerated by a large dosage of iron salts can be increased to a marked extent by additional feeding of kidney or spleen.

The protein requirement of man. *J. Am. Med. Assocn.* **90**, 32, 33 (1928).

An interesting summary, evidently occasioned by the foregoing paper of Beard, of the various standards of protein intake which have been advocated during the past quarter of a century. It is considered significant "that the healthy youth of the country, as represented by the average student of medicine, has today become adjusted to a protein consumption not exceeding 80 gm. daily. It would be interesting to learn what has brought this 'standard' about."

Johnston, J. A. Place of the banana in the diet of children. *J. Am. Dietetic Assocn.* **3**, 93–97 (1927).

From observations made on patients at the Infants' Hospital and the Children's Hospital in Boston conclusions are drawn that ripe banana can be fed with safety to very young babies and that it constitutes a valuable addition to the diet of children, particularly of those whose appetite must be stimulated during recovery from protracted illness. Six cases of infantile scurvy, one of which was noted in a paper by Eddy and Kellogg (see J. HOME ECON. **19**, 403 (1927)), have been cured by the use of banana to the extent of 40 per cent of the total calories. Beneficial results have also been obtained in the treatment of celiac disease with banana.

Joslin, E. P. The diabetic diet. *J. Am. Dietetic Assocn.* **3**, 89–92 (1927).

In discussing the changes in the diabetic diet brought about since the discovery of insulin the author emphasizes the fact that although "the present diabetic diet no longer demands a Spartan for a patient or presents a struggle for the dietitian," diet is still the most important factor in the treatment of diabetes and disregard of diet may be followed by death either from coma as a result of increased metabolism or from arteriosclerosis resulting from excess cholesterol.

Macomber, D. The effect of diet upon reproduction. *J. Am. Dietetic Assocn.* **3**, 57–67 (1927).

A general discussion, with numerous references to the literature, of the part played by proteins, certain mineral salts, and vitamins in reproductive processes and of what should be included in a normal balanced diet from the point of view of reproduction, with special attention to adjustments for underweight and overweight subjects.

Tubbs, T. and Bellinger, E. Adjusting the diet to the patient with pernicious anemia. *J. Am. Dietetic Assocn.* **3**, 7–13 (1927).

A description of the standard special anemia diet used at the Peter Bent Brigham Hospital, Boston, for the Minot-Murphy liver treatment of pernicious anemia (see J. HOME ECON. **19**, 70, 1927) together with sample menus for preliminary low-caloric

diets with cooked liver and liver pulp, full diets with raw and cooked liver, and a special diet for patients finding it difficult to take liver. Recipes for the various preparations of liver used in these menus have been noted from an earlier paper. (See J. HOME ECON. **19**, 163, 1927).

Bauer, W. and Aub, J. C. Studies of inorganic salt metabolism. I. The ward routine and methods. *J. Am. Dietetic Assocn.* **3**, 106–115 (1927).

This paper contains a detailed description of the operation of the Special Study Ward at the Massachusetts General Hospital where investigations are being conducted on calcium and phosphorus metabolism in various diseases. Data are included on the calcium and phosphorus contents, as analyzed in the hospital laboratory, of the various foods used in the low calcium diets described, and on individual variations in calcium excretion and the average negative calcium balances obtained in normal people on a low calcium diet.

Mitchell, H. H. and Kruger, J. H. The effect of muscular work upon the endogenous catabolism of the tissues. *J. Biol. Chem.* **76**, 55–74 (1928).

A critical review of the literature dealing with the relation of muscular contraction to protein metabolism, followed by the report of a series of metabolism experiments conducted on rats to determine the effect of muscular work on the excretion of total urinary nitrogen and urinary creatinine. In the opinion of the authors the necessary conditions for such a study involve the use of a diet which is approximately nitrogen-free and at the same time adequate in energy value and the continuation of the period of nitrogen-free feeding until the urinary nitrogen approximates the endogenous level. In the present study two such diets were used, one consisting chiefly of carbohydrate and the other of fat and each containing approximately 4 per cent of dried egg-white as the sole source of protein. The rats were kept in glass metabolism cages provided with devices for keeping them quiet during the rest periods and in active exercise during the activity periods. No appreciable increase in the excretion of total endogenous nitrogen or of creatinine in the urine was obtained with exercise on either the high carbohydrate or high fat diet.

The authors conclude that an increased catabolism of muscle tissue is not an inevitable consequence of increased muscular activity.

Bills, C. R., Honeywell, E. M., and MacNair, W. A. Antiricketic substances. VII. Biochemical and spectroscopic studies on purified cholesterol. *J. Biol. Chem.* **76**, 251–261 (1928).

This paper includes a more detailed description than hitherto published of the line test for vitamin D and a comparison of the antirachitic properties, as thus determined, and the spectrum analyses of irradiated highly purified cholesterol preparations.

The observations of Hess, Windaus, and Rosenheim and Webster that the contaminant of cholesterol which becomes antirachitic on irradiation is ergosterol were confirmed but it was also demonstrated that cholesterol purified by charcoal or bromine had slight antirachitic properties after irradiation. The failure of other investigators to obtain similar evidences of activation is attributed to the use of too small an amount of the material in the animal tests, the amount required being about thirty times that of unpurified irradiated cholesterol. Spectroscopic examination of these less active preparations showed faint bands corresponding to those of ergosterol as well as two other bands at 315 and 304$\mu\mu$. These observations raise some doubt as to whether ergosterol is the only substance acquiring antirachitic properties on irradiation.

Evans, H. M., and Burr, G. O. On the amount of vitamin B required during lactation. *J. Biol. Chem.* **76**, 263–272 (1928).

In attempts to find suitable supplements for diet 232 during the lactation period (see J. HOME ECON. **19**, 710 (1927)) it was found that 15 per cent of yeast was barely sufficient and 10 drops daily of tikitiki (a

concentrated extract of rice polishings) insufficient to promote lactation but that a combination of 10 per cent of yeast with 3 drops daily of tikitiki rendered the diet entirely satisfactory for lactation. This is thought to indicate that the supplemented need for lactation as compared with growth is the antineuritic vitamin (vitamin F) rather than the heat-stable factor of vitamin B (vitamin G).

Evans, H. M., and Burr, G. O. Development of paralysis in the suckling young of mothers deprived of vitamin E. *J. Biol. Chem.*, **76**, 273–297 (1928).

The authors describe a peculiar paralysis in suckling rats on diets considered to be adequate in every respect except vitamin E. The paralysis involves the body musculature and legs and although never complete, is generally incurable.

Goldberger, J., and Sydenstricker, E. Pellagra in the Mississippi flood area. *U. S. Pub. Health Repts.* **42**, 2706–2725 (1927).

This discussion of pellagra prevalence and conditions related thereto in the area recently overflowed by the Mississippi river and its tributaries in Tennessee, Arkansas, Mississippi, and Louisiana is based upon personal conferences of the authors with physicians, health officers, tenants, planters, business and professional men, and farm demonstration agents in the localities visited. The noticeable increase in pellagra in at least three of the four states visited is attributed quite as much to the unfavorable economic condition of the entire cotton-producing area as to deprivation directly due to the flood. Diversification of agriculture in this area, including the production of crops and dairy and other cattle, is recommended as the best means of solving the pellagra problem.

Olesen, R. Endemic goiter in Oregon. *U. S. Pub. Health Repts.* **42**, 2831–2849 (1927).

This report of a thyroid survey of nearly 18,000 school children in Oregon, showing a percentage of 30.9 with thyroid enlargements of varying degrees, is of particular interest because, in place of universal prophylaxis by iodized water or salt, prophylactic measures are recommended for the thyroid-normal children only and treatment by skilled physicians for those with thyroid enlargements.

"Iodized table salt, a prophylactic of distinct promise, is under a cloud of suspicion at the present time because of alleged harmful effects exerted upon hyper-susceptible individuals. While some of these reports are undoubtedly authentic, it is believed that the incidence of endemic goiter has been reduced in an encouraging degree in some localities by the general use of iodized table salt. It can only be hoped that the iodine content of salt can be so adjusted as to be efficient in preventing simple goiter, and, at the same time, be incapable of exciting a diseased gland to hyperfunction. Until such a scientific readjustment of the iodine content has been made it may be best not to advocate the widespread use of artificially iodized table salt."

S. L. S.

TEXTILES AND CLOTHING

Contributed by the staff of the Division of Textiles and Clothing, Bureau of Home Economics, United States Department of Agriculture

Draves, Carl Z. The use of the spectrophotometer in the dyestuff industry. *Amer. Dyestuff Reptr., Sample Swatch Quart.*, January 23, 1928, p. 43.

The spectrophotometer is an instrument which measures quantitatively the proportion of light absorbed in the different parts of the spectrum by colored substances in solution. Its usefulness for certain purposes is in the following order: identification, research and routine standardization, and testing of dyestuffs.

Methods of determining the strength of a dye solution include the dye test which consists in actually dying cloth strips and using the naked eye in detecting slight differences in hue for color matching purposes; spectrophotometric reading; and chemical titration which reduces the dye with titanous chloride. Because commercial dyestuffs are not chemically pure but contain greater or lesser proportions of chemical isomers, impurities from side reactions and shading colors, the dye test must remain for the present the only final authoritative procedure for the determination of dyeing strengths. However, with the spectrophotometer a difference in strength between two samples can be detected with great certainty when the actual difference is even as small as 2 per cent, an accuracy greater than can be attained with the dyeing method. The spectrophotometric determination is far superior to chemical titration as a general auxiliary method to the dye test because it usually agrees much better with the dye test and can be employed for many commercial dyes for which no satisfactory method of analysis by titration has been worked out.—A. E. H.

Scott, W. M. Perspiration. *Amer. Dyestuff Repr., Sample Swatch Quart.* Jan. 23, 1928, p. 69.

The fastness of dyestuffs to perspiration has long been a subject of considerable interest to dyestuff manufacturers and to the textile users of dyes. Taking into consideration the facts known about the perspiration excreted from the body of a normal individual, the sub-committee on perspiration of the American Association of Textile Chemists and Colorists recommended that two solutions, one acid and one alkaline, should be used for artificially testing the fastness of dyestuffs to perspiration. Formulae for these solutions are given.

The entire range of National Direct dyes was studied in view of the use of these dyes for coat linings and other purposes where fastness to perspiration is an important factor. Each of two dyed patches of cloth was attached to a white cotton patch and thoroughly wetted out, one in the acid and the other in the alkaline test solution. The patches were then judged for alteration in shade and staining of the white cotton. A list of dyes which showed practically no change in shade or staining of white cotton in either the acid or alkaline test is reported.—A. E. H.

Rubin, Louis. The destiny of clothes. *Clothing Trade J.* **30**, 71 (1927).

A short play which might prove suggestive if used in the study of clothing for class room students. Costumes in three periods are dramatized, showing the contrast with present styles. Suggestions are given for the number of characters necessary, the stage setting, costumes, characterization, and the time required.—M. C.

A new effective moth-repellent. *Clothing Trade J.* **30**, 166, 180 (1928).

Millions of dollars of the estimated two million dollars annual damage in the United States due to injurious insects may be attributed to the clothes moth. Indications are that the damage done by this insect is becoming greater and greater each year.

Because the need of more adequate control methods was recognized the Mundatechnical Society of America, a group of the largest and most progressive dry cleaners in the United States, commissioned their fellow at Mellon Institute of Industrial

Research, to study the possibility of more practicable methods. Experimental work was started in 1922.

The results of this investigation which included rigid laboratory and practical tests show that a series of related products derived from cinchona bark fulfill not only the clothes moth repelling requirements of the dry cleaner and dyer but those of other industries as well. The study of the products is being extended with the idea of making them generally applicable in homes, stores, warehouses, and factories.

Moth proofing service based upon the products for the past two years has been offered in plants of members of the Mundatechnical Society located in eight large cities in various sections of the country. The equivalent of several hundred thousand pounds of wool, in the form of wool garments, fur coats, upholstered furniture, rugs, and other house furnishings, have been treated and this successful extensive use of the process has indicated its adaptability to the dry cleaning business.—M. C.

Clark, Edna L. Why married women choose to wear cotton or silk. *Commerce and Finance*, **16**, 2390 (1927).

Clark, Edna L. Why single women choose to wear cotton or silk. *Commerce and Finance*, **16**, 2441 (1927).

Two articles written from the results of a survey made in the early summer of 1927 by the Bureau of Home Economics, Department of Agriculture, on the uses of cotton in clothing. The replies of 701 married women to questions on the kind of garments they wore five years ago as compared with today and their reasons for changing are given in the first article. "Laundering" as a reason received the highest proportion of replies for underwear and nightgowns; while "more attractive" received the highest proportion for summer dresses, winter dresses, kimonos, negligees, and stockings.

The second article reveals the change which young women living with their parents and self-supporting single women are making in the choice of material for clothing and their reasons for the change. The replies of 444 daughters eighteen years of age and over, living at home and supported by the family income and of 175 single women eighteen years of age and over who are supporting themselves are given. All parts of the United States are represented in the study. Of the four groups of reasons, —care, style, comfort, and cost—style received the highest percentage of replies by daughters for summer dresses, winter dresses, underwear, kimonos and negligees, and stockings, and comfort the highest percentage for nightgowns and pajamas. Self-supporting women, however, gave care the highest proportion of replies for summer dresses, underwear, nightgowns, and pajamas, and style the highest percentage for winter dresses, kimonos and negligees, and stockings.

In the summary it is stated that during the preceding five years young women eighteen years of age and over who are supported by their families have made a greater change from cotton to silk or rayon than have the women who were earning their own living. Care and style were the most important factors listed by daughters and by self-supporting women choosing silk rather than cotton. Self-supporting women give more emphasis to "care" than either wives or daughters, but "style" is a more important factor in choosing silk instead of cotton for daughters than for the others. —M. C.

New, G. F. The measurement of the resistance of flax yarns to wear. *J. Textile Inst.*, **18**, T595–605 (1927).

The author discusses the design of a wear-testing machine and points out that the rubbing surface should be of steel in preference to a piece of the same fabric and should have a curved rather than plane surface, the sharpness of the curve to represent a compromise between a high curvature with more uniform rubbing action and a lower curvature which permits of more rubbing surface. An oscillatory motion of the rubbing surface over the test strip is most analogous to service conditions and by keeping the test strip stationary, it is possible to eliminate possible inertial effects of tensioning weights on the

stresses induced in moving test pieces. In a range of speed from 50 to 150 r. p. m. a rate of 120 r. p. m. was adopted. In order to save time the tersion was adjusted to bring the mean to the order of 1000 rubs, making different tensions necessary for comparing fabrics of widely different properties. An increased angle of contact produces a rapid increase in tension with consequent increased abrasive action.

The effect of variations in structure upon the resistance of yarns to abrasion is discussed. An increase in yarn twist increases resistance to rubbing even when the breaking strength shows no increase. The resistance to abrasion decreases more rapidly than does the weight per unit length of yarn. Evidence suggests that the character and number of the processes to which a fiber is subjected during its preparation directly influences its resistance to wear. Boiling decreases resistance to wear while the addition of size to either the normal green or boiled yarn produces a pronounced increase which is much greater than the corresponding increase in tensile strength. The resistance of green and boiled yarn remains practically stationary in a humidity between 40 and 80 per cent and rises sharply with a further increase in humidity. Starch yarns tested in the least favorable humidity still displayed an increased resistance over the unsized yarns. Wear tests show the relative qualities of a series of yarns to be very similar to those estimated by spinners or weavers. Also the tendency of a yarn or cord to become fluffy in use can be ascertained and the inferiority or superiority of certain sizes will be indirectly indicated by their comparative resistance to the test.—E. C. P.

Hirst, H. R. A simplified method for estimating oil in textiles. *J. Textile Inst.* **18**, T606 (1927).

In the method here described ether is replaced by cold acetone, thus cutting down fire danger and the liability of oxidation of the unoxidised oils. The author gives the following method of analysis:

"Twelve to twenty grams of the fibrous material are cut into small pieces and placed in a wide-mouthed 8 oz. bottle, having a well ground stopper. Two hundred cc. of dry acetone are added, and allowed to stand for 24 hours with occasional shaking; 100 cc. of the liquor are withdrawn, filtered if necessary, evaporated to dryness in a weighed bottle in a stream of carbon dioxide gas (if considered necessary), and cooled in a desiccator and weighed. The weight multiplied by 2 gives the total oil in a sample. Acetone AR (British Drug Houses, Ltd.), has been found to be sufficiently pure for the purpose. Recovered acetone should be distilled over calcium chloride, and is then satisfactory for re-use."

The method is more rapid and, in the estimation of oxidized oil, more reliable than the Soxhlet method.—E. C. P.

Sommer, H. The action of atmospheric influences on fiber materials. *Monatschr. Textil Ind.* **42**, 35–8, 96–100, 158–162, 206–211 (1926). Resumé in *Chem. Ztg.* **51**, 777–8 (1927).

About 50 fabrics, chiefly wool but including also cotton, artificial silk, hemp, flax, and jute, were exposed for one year on an observatory roof facing south at an angle of 45°. A few parallel tests were carried out in the vicinity of a railway to study the effect of purity of the atmosphere. Tests were made every three months to determine the progressive destruction due to the combined action of light, air, and weather as shown by changes in appearance, tensile strength, and chemical properties. Among the wool materials, chromium and copper field-gray uniform material as well as several lighter, undyed materials were investigated to study the effect of chromeing, dyeing, depth of color, and acid and alkaline treatment. After three months, damage to the side exposed to the atmosphere was evident in every case. This damage increased approximately in proportion to the number of sun hours of exposure. The partial destruction could be shown after a light washing by the appearance of the weave on the exposed side in contrast to that of the unchanged back side, also by decrease in weight and strength, by the production of water soluble products and of sulfuric acid, and by increased dye affinity. The latter property

could be readily shown microscopically. Ammoniacal silver nitrate solution was especially sensitive as a test for the degree of destruction. N/10 NaOH caused a peculiar swelling of the injured portions of the fibers, the resulting differences in stress leading to curling. The rate of decomposition was dependent partly on the thickness of the fiber and the porosity of the materials. Treatment with sulfuric acid retarded the action, alkali hastened it, and chromeing, even more than copper sulfate, exerted a particularly effective protective influence. Thus the Kertess findings concerning the destruction of wool by the atmosphere and the favorable influence of chromeing are confirmed. In the cases of the other fibers studied, a progressive destruction dependent upon the time of exposure was found. The damage was greater and more rapid in the impure atmosphere. The author concludes that the decomposition occurring on weathering takes place essentially on the surface of the exposed side, and is due primarily to the short waves of light. Wool and bast fibers are especially sensitive to the action of moisture as a catalyst. If the sensitivity of the fibers to weathering is judged by the number of sun hours necessary to decrease their tensile strength to one-half of the original, an amount which renders them useless for practical purposes, the fibers arrange themselves in the following order of decreasing sensitivity: silk (under 200); jute (400); artificial silk (900); cotton (940); flax (990); hemp (1100); raw wool (1120); and chromed wool (approximately 1900).—R. K. W.

MISCELLANY

Research in Land-Grant Colleges. The problems, trends, and status of research in these institutions as shown in papers and discussions at the November meeting of the Association of Land Grant Colleges and Universities is the subject of the editorial in the February issue of the *Experiment Station Record*.

United States Government Specifications. Master specifications recently issued in the circulars of the Bureau of Standards, United States Department of Commerce, included those for white table oilcloth; cotton tablecloths; axminster, wilton, and plain velvet carpets and rugs; and indelible marking inks. Copies of the various circulars may be purchased for five cents each from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

Canned Tomatoes. Advocates of the tomato as a source of vitamins should be encouraged by the estimate made by the United States Bureau of the Census that in 1927 the total pack of tomatoes in the United States was equivalent to 13,127,042 cases, each containing 24 number 3 cans.

Cooperative Extension Service. Oscar Baker Martin, for many years in the extension service of the United States Department of Agriculture and recently in charge of extension work in the Southern States, was transferred on February 1 from the Washington office to College Station, Texas, where he is to act as director of extension work in that state.

Special Training for Home Economics Teachers. In the report of a study made to answer the question whether or not high school teachers teach the subjects for which they were trained, J. A. Baer in the *Educational Research Bulletin* of the Ohio State University for January 25, 1928, reports that in junior high school home economics teachers make the best showing, one-half of them having received special training in this subject. In senior high schools the proportion is slightly lower but is exceeded only by that for teachers of agriculture.

Color in Buildings. The use of bright color on both the outside and the inside of school buildings is being experimented with in two Liverpool schools and is attracting

much interest in educational journals. Attention is called to the general tendency in various European countries to show more bright color on the streets, not only in the walls, decorations, and accessories of buildings, but even in pavements, as was noted on page 543 of the JOURNAL for September, 1927.

Selection of Bed Linen. Rosamond Cook contributes a clear, practical discussion of the points according to which sheets and pillow cases should be chosen to the *Ladies Home Journal* for January.

Thrift Shop. The Red Cross Chapter in Montclair, New Jersey, has for almost five years been operating a shop which sells partially used clothing, household goods, and other articles contributed by members of the community, distributes books and magazines to "shut-ins," students, and prisons, and arranges for the "rehabilitation" of toys to be given away at Christmas. According to the *Red Cross Courier* for February 15, 1928, the profits on sales over and above all expenses are sufficient to support two scholarships and aid the visiting nurses' service.

Sunshine and Clothing. Pictures of children's schools and general sports in Europe suggest a general tendency to expose more of the body, one reason for which appears to be the new therapy of light. A recent article in *Sunlight*, an English journal devoted to popularizing that theory, advocates loose collars and short trousers which leave the knees bare above the stockings of the so-called "golf" type as suitable innovations in the ordinary costumes of men, especially for sports.

Clothing the Baby in the Tropics. This is the title of Bulletin No. 2 (whole No. 3) of the Department of Home Economics, University of Porto Rico, in which Marie Vestal, assistant professor of home economics, discusses the selection and making of a layette suitable for wear in that climate. The material is based on a study of clothing actually worn by Porto Rican babies as well as on their theoretical requirements.

Economics of Fashion. Dr. Paul H. Nystrom is reported in *The Silkworm* as giving a course in this subject at Columbia University during the present semester.

Victoria and Albert Museum. This famous national British museum of applied art publishes a series of books about certain of its collections, with text written by experts and photographic reproductions of many of the objects. The volumes make excellent reference material on the history of textiles, furniture, costume, and other fields of applied art. Full information regarding them may be obtained from the British Library of Information, 44 Whitehall St., New York City.

Nutrition Class in Prison. Auburn Prison for women has, with the cooperation of the Cayuga County (New York) Chapter of the Red Cross, introduced classes in nutrition. According to an article in the *Red Cross Courier* for January the inmates find it a welcome change from such routine work as making mattresses and mending.

Glassware. A practical, well-informed article about present-day table glass and its qualities was contributed by Vincent R. Bliss to *Hotel Management* for January and noted at length in *Restaurant Management* for February.

Pan American Notes. Various attempts to establish the cultivation of the silkworm in Central and South America are described in the *Bulletin* of the Pan American Union for February, those in Nicaragua and Brazil appearing the most successful up to the present.

The same issue describes the women's exposition held in Santiago, Chile, last October, to celebrate the fiftieth anniversary of the decree admitting women to the University of Chile. Present education for girls and

women formed an important part of the exhibits. Many household crafts appeared in those from public and private schools, while those from normal schools included training in child care.

An Architect's Social Service. One of the three medals awarded by *Better Times* at its dinner on November 16, 1927, for distinguished social service went to Andrew J. Thomas, architect of some of the most successful examples of decent, low-cost housing for wage-earners in New York City, among them, the project of the Metropolitan Life Insurance Company in Long Island City.

Home Cadets or Household Orderlies. These names are suggested by a correspondent of *Home and Country* for home helpers employed by the day. The hope is that by designating the work by a name free from the suggestion of old-time domestic service more young women, and those of a better class, will enter the field in which the demand at present far exceeds the supply in England. In this country the terms household assistant and mother's helper have been suggested.

NEWS NOTES

GENERAL

American Association for the Advancement of Science. The next annual meeting of December 1928 is to be held in New York City, December 27th to January 2d, 1929 and the following one in Des Moines, Iowa, on corresponding dates of 1929 and 1930.

American Country Life Association. The call has been given for the eleventh annual country life conference at Urbana, Illinois, June 18 to 21, 1928. Rural-urban relations is to be the central topic, as it has been for local conferences held during the winter in New York, Philadelphia, and elsewhere.

American Dietetic Association. The place and time of the next annual meeting have been set for the New Willard Hotel, Washington, D. C., October 24, 30, and 31, 1928.

American Federation of Arts. Mr. Alexander B. Trowbridge, a well-known consulting architect, has been selected for the newly-created post of director of the Federation, and with the help of grants from the Carnegie Corporation and the General Education Board an intensive effort is to be made to present to the public the best that is being produced in industrial and applied art. Miss Helen Plumb is to take charge of the program in industrial art, which calls for the display in American communities of the best modern work of many countries. Mr. Richard Bach, whose work at the Metropolitan Museum has been so effective in stimulating the cooperation of manufacturers and designers, is also to assist, and the movement will further have the counsel of Professor Charles R. Richards of the General Education Board, formerly director of the American Museum Association.

Art Alliance of America. Announcement is made of a rug design competition for three substantial prizes offered by the Mohawk Carpet Mills. Designs should be submitted from April 20 to 24 to the Secretary, Rug Design Competition, Art Alliance of America, 65 East 56th Street, New York City, who will also furnish full information and entry blanks.

The Alliance also announces that in the recent competition for wall-paper designs the award of a first prize was withheld and that the second prize went to Juan Oliver of New York City.

Camp Fire Girls. To celebrate the sixteenth birthday of the organization on March 17, many of the groups made children's clothing and layettes to replenish the supplies of the Red Cross depleted by recent disasters. Special birthday honors were awarded to girls who in addition fulfilled two out of a list of ten requirements, most of them within the fields of home craft or hand craft.

Institute of Chemistry. The second session of the Institute of the American Chemical Society will be held in Evanston, Illinois, July 23 to August 18, 1928. The program for the twenty-eight conferences has not yet been determined, but one group of subjects is expected to deal with the better utilization of raw materials.

Institute of International Education. Dr. Stephen Duggan, for thirty-five years professor of government at the College of the City of New York, is hereafter to devote himself entirely to the direction of the Institute, with which he has long been associated.

Interstate Stream Conservation. Nine states with streams coming from the Alleghany watershed have entered into agreement through their departments of health to provide joint sanitary control over these waterways. The purpose is to abate pollution in any state where such pollution may be harmful to adjacent or downstream states and thus to conserve the necessary

water resources for domestic and commercial needs. The cooperating states are New York, Pennsylvania, Maryland, West Virginia, Ohio, Indiana, Illinois, Kentucky, and Tennessee.

Land Grant College Survey. The advisory committee on vocational education appointed in February to participate in the survey being conducted by the United States Bureau of Education includes two home economists, Mable V. Campbell of Missouri and Mrs. Mildred Weigley Wood of Arizona.

Mexican Teachers visit California. Through the International Council for Educational Progress arrangements have been made for a hundred Mexican school teachers and administrators to visit California as the guests of Californian educators for a month this spring. The Mexican government brings the visitors to the border at El Paso or Nogales where they are met by a committee of their hosts and taken on a tour of educational institutions in California, including not only universities, colleges, and schools but also such organizations as the Y. M. C. A., the Y. W. C. A., the Boy Scouts, various social service agencies, and student clubs.

Museum Hour. At the meeting of Experts on the Educational Functions of Museums held last October under the auspices of the International Institute of Intellectual Cooperation in Paris, a resolution was passed that a "museum hour" be included once every week or fortnight in all school programs, and the opinion of the meeting was that the educational influence of museums should be extended not only to children but also to adults of all classes.

National Better Homes Week. In 1928 this is to be celebrated April 22 to 28, and the new "Guidebook for Better Homes Campaign in Cities and Towns" can be obtained at ten cents a copy from the national headquarters of Better Homes in America, 1653 Pennsylvania Avenue, Washington, D. C.

Phi Upsilon Omicron. The 1928 Conclave will be held June 21, 22, and 23, at Ames, Iowa. The members of Omicron Chapter of Iowa State College, the hostesses, are very anxious that many of the members of other chapters attend. This will be a fine opportunity to visit this splendid home economics department, to participate in a worthwhile program, and then to go to Des Moines to attend the American Home Economics Association meeting.

On January 7, 1928, Dr. Isabel Bevier, for many years the much-loved director of the home economics department at the University of Illinois, was initiated into Phi Upsilon Omicron as a national honorary member. The privilege of initiating her was granted to Pi Chapter at the University of Illinois.

Progressive Education Association. The eighth annual conference took place in New York, March 8, 9, and 10, with "Education for today and tomorrow" as the central topic. At one of the six sessions Mrs. Lucy Sprague Mitchell spoke on "Making young geographers instead of teaching geography," a group of teachers from nearby progressive schools discussed "The use of New York City as source material in teaching" while another session was devoted to developments in Germany, Russia, and the Far East, and the dinner meeting considered "Newer aspects of college education." Saturday morning was given up to round table discussions of special questions. On the three days previous to the meeting special visits to schools were arranged for the benefit of conference members.

Preparation of Rural School Teachers. The United States Commissioner of Education called a national conference on the professional preparation of rural school teachers which met in Boston on February 25. It discussed the problem of supplying and maintaining a suitable staff for rural elementary schools, which now have to contend against the handicap of salaries averaging a thousand dollars a year less than those paid to city teachers.

School Buildings Specialist. Miss Alice Barrows has been appointed specialist in school buildings in the city school division

of the United States Bureau of Education, in response to a general demand in educational circles. An exhaustive study of school buildings in 100 cities is being undertaken by the Bureau.

Tri-State Conference of Dietitians. The Chicago Dietetic Association sponsored a two-day conference of dietitians from Wisconsin, Illinois, and Indiana, held January 27 and 28 at the Albert Merritt Billings Hospital, University of Chicago. Speakers included well-known specialists from nearby hospitals and schools, as well as members of the Association. Representatives from four other states were also in attendance and it is hoped that this one may lead to yearly mid-western conferences.

Winifred Stuart Gibbs. Winifred Stuart Gibbs, a well-known home economist and charter member of the American Home Economics Association, died of heart trouble in New York City on February 11, 1928. She was perhaps the best known for her work with the New York Association for Improving the Condition of the Poor, but had also been in the extension service of the United States Department of Agriculture and with various commercial firms. More recently she was editor of the *American Food Journal* and its supplement, *Food and Health Education*, which recently changed its name to *The Home Economist*. In that work she is succeeded by her assistant, Jessie A. Knox.

NEBRASKA

Nebraska Home Economics Association. The council met in Omaha December 19 with a large attendance. A committee consisting of Birdie Vorhies, Rose Shonka, and Lucy Harte was appointed to plan for outlining a course of study for junior and senior high schools in Nebraska.

University of Nebraska. Among the girls who specialized in institution management and were graduated from the home economics department last June, Martha Nesladek was for six months student dietitian at the Michael Reese Hospital in Chicago and is to be assistant dietitian at the Lebanon Hospital, New York City; Della Caster was also a student dietitian in the Michael Reese Hospital; Thora Baer is in the Lincoln General Hospital in Lincoln; and Incille Paddleford goes to Michael Reese Hospital.

The members of the class in advanced clothing design have arranged an exhibition of some seventy Holbein prints, including color and line drawings, which are available for students to study and to purchase. Similar exhibitions and sales are held during the year of Japanese prints and hand woven textiles.

"The Quest," a pageant by Professor Edna Benson produced on the College of Agriculture campus last spring, as described in the JOURNAL for June, 1927, was recorded by the motion picture camera, and the film is now available for high schools, woman's clubs, parent-teacher associations, and home economics clubs. It has been booked to fifty-eight different towns between January and May, 1928.

A recent visitor, Blanche Clark of Better Homes of America, Washington, D. C., conferred with the home economics department about plans of the "Better Homes Week" to be held the last week of April.

Mina Morris, as fellowship student in the textiles and clothing division of the department of home economics, presented as her master's thesis a study of the relation of clothing to the control of body temperature and development.

Lillian Curyea, graduate student in home economics, has recently prepared, under the direction of the textile and clothing staff, a collection of illustrative material to be used in teaching clothing and related art in high school classes. It contains some eighty-seven items, including textiles, reproductions of masterpices, Japanese prints, brasses, pottery, glass, and books. Mimeographed lists of the materials and the addresses from which they may be obtained will be furnished by the home economics department, University of Nebraska, on receipt of ten cents in stamps.

Matilda Peters is this year giving the course in hospital dietetics at the University

School of Nursing connected with the College of Medicine at Omaha, a course which has for several years been under the foods and nutrition division of the University.

Research projects in home economics at the University include those on household equipment and management in farm homes under Dr. Greta Gray; studies of human metabolism by Rebekah Gibbons; cooking tests with beef from animals fed in various ways by Matilda Peters; studies of teaching difficulties under the direction of Jane Hinckley, and of qualifications for home economics teachers under Florence Corbin; and investigation of the color perception of infants by Ruth Staples.

Organized Agriculture. Students in the College of Agriculture cooperated in the annual Farmer's Family Fun Feed which was served to 800 Nebraska people in the student activities building, January 4. Under faculty supervision, forty boys and sixty girls who volunteered through the Ag Club and the Home Economics Club worked with girls majoring in institution management.

NEW ENGLAND

New England Home Economics Association. The program of the mid-winter, all-day meeting held at Simmons College on January 28 was in charge of the Teachers' Section, Helen Baker, chairman.

At the morning session Frederic W. Howe of Pratt Institute, Brooklyn, spoke on "Readjustments of the home" tracing the changes since the days when the home was a unit to its present "state of physical, mental, and spiritual indigestion." As signs that the desire for self-expression which has taken women out in various fields of activity will bring them back to make finer homes, he cited their questioning of their outside occupations, the effect of the present interest in athletics, the present-day studies of the mental growth of the child which will affect the home in a generation, and certain signs of a spiritual awakening that will follow more slowly.

At the luncheon served by the institutional management classes of the college 260 were present. Greetings were brought from the various state associations of New England by representatives who were guests of the New England Association at this meeting

In the afternoon Professor May B. Van Arsdale of Teachers College, Columbia University spoke on "The business of being a consumer." She emphasized the importance of teaching production together with consumption, because it is impossible to be an intelligent consumer without knowledge of the problems involved in production.

A series of ten lectures on the development of the child has been conducted during the fall and winter months by the Social Workers Section. The meetings have been well attended, attracting nutritionists from hospital out-patient departments, field workers in nutrition, school nurses, social workers, and teachers. Several new members have been added to the association through the interest aroused by the course. Among the speakers of note were Dr. Harry F. Latshaw of the Harvard School of Education, Dr. Percy R. Howe of Forsyth Dental Infirmary, and Dr. Armin Klein, director of posture clinics, Massachusetts General Hospital and Boston Health Units.

NEW MEXICO

District Home Economics Conferences. The state has been divided into four districts and each district will hold a conference for home economics teachers some time during the spring.

District III held a meeting in Deming on February 4 with almost perfect attendance. Family and community relationships made the theme for the day's discussion under the leadership of Garnet Searle of State Teachers College. The home economics student club representatives held a meeting in Deming at the same time with about forty girls present.

District IV held its meeting in Albuquerque on February 11 with Mildred Dodds of the University of New Mexico in charge.

NEW YORK

New York State Home Economics Association. *Southern District.* The Southern District is steadily gaining in membership, a large number having become affiliated with the association since the annual meeting in November. The records now stand with fifty-one paid members.

Western District. Rabbi Joseph L. Fink in an address at the luncheon meeting at the Buffalo Consistory on February 4 spoke of the family as "the indivisible unit of society. . . . . One of the dangers of modern life is the hectic pursuit of amusements and diversions outside the home. . . . . Theoretically and historically, the home serves as a substitute for the temple or the church."

Gertrude Parker, president, presided at the luncheon attended by seventy members. Reports were given by Pauline Knight, chairman of the Ellen H. Richards Fellowship committee, and Etta Hackett, chairman of publicity; Myrtle Caudel told of available scholarships; and Henrietta K. Straub, chairman of programs, announced future meetings.

In March the district meeting was an evening one with a speaker and a report from the legislative committee.

Following the luncheon meeting on April 20 a trip will be made to the "Better Homes House" in Kenmore, which is being built and furnished by the home economics classes of Hutchinson High School under the direction of Henrietta M. Langner. After the inspection tea will be served by one of the foods classes. During the week that follows "Better Homes" will be stressed in all schools by means of special assembly programs, contests, teas, lectures, and various evening events for the parents.

Cornell University, College of Home Economics. Cora Binzel, former professor of rural education, has accepted a position as head of the training department of James McCreery Company, New York City. Emma Conley, former home economics supervisor of New York State, is taking Miss Binzel's place at Cornell.

The Northeastern States Extension Conference, held at Cornell January 21, 22, 23, was attended by directors of extension from twelve states, state leaders, home demonstration agents, and specialists in household management and child training, the two fields particularly emphasized at this meeting. The general theme was a study of the environmental conditions in the home which affect family life and especially the child.

Farm and Home Week was celebrated February 13 to 18. Among the speakers at the New York State College of Agriculture and Home Economics were Honorable Nellie Taylor Ross, ex-governor of Wyoming, who spoke on the place of woman in the home and in the community, Dr. W. O. Thompson, formerly dean of the State College of Agriculture of Ohio University, and Dr. Livingston Farrand, president of Cornell University.

Each year the men students in the course in hotel management have an opportunity to gain practical experience in the management and operation of hotels and to meet some of the principal figures in the hotel world by taking active charge of a metropolitan hotel for a day. On November 14, 1927, thirty-two students operated the Roosevelt Hotel in York from 7:30 a.m. to 6:30 p.m.

State Teachers College, Buffalo. Florence Scoulor of Wisconsin has accepted the science position in the home economics department left vacant by the marriage of Frances Crooker to Mr. Dennis Sawyer in December 1927. Mrs. Sawyer's future home will be in Worcester, Massachusetts.

Gertrude Parker, president of the Western New York Home Economics Association, spoke on "Service" to the students of the Home Economics Club.

An interesting program celebrating Ellen H. Richards' birthday was presented in December by the Home Economics Club. It was a dramatization depicting the episodes in Ellen H. Richards' life that influenced her and the community in which she lived.

Helen C. Smith, who is on leave for graduate study, has completed a semester at the Merrill-Palmer School and is now

registered at Teachers College, Columbia University.

Margaret Van Volkenburg, who was a student at Merrill-Palmer last semester, has resumed her studies as a senior in the College.

Neva Merrill of the senior class is registered for the second semester at Merrill-Palmer.

The registration of the home economics department is 175, including 36 seniors who expect to receive the bachelor of science degree in June, 1928.

NORTH CAROLINA

Institute on Parental Education. The first state-wide conference on parental education was held in Raleigh February 14, 15, and 16. Among the speakers on the well-planned program were Dr. Ruth Andrus, Dr. Bird T. Baldwin, Dr. Ernest S. Groves, Mrs. Jane S. McKimmon, Anna E. Richardson, Blance Shaffer, and Margaret Edwards.

NORTH DAKOTA

North Dakota Agricultural College. A new tea room to be operated in connection with the college cafeteria is being equipped under the direction of Ann Stowell, who has charge of the department of institutional management.

A course on the social and economic problems of the home is being given for the men students of the institution by Alba Bales, dean of the School of Home Economics. This is the second year that such a course has been offered, and the response has been most interesting as well as gratifying.

A short course for homemakers was given in connection with the annual North Dakota Farmers' Week, January 16 to 20, by the members of the home economics faculty.

Three conferences for teachers in the vocational high schools of the state were conducted by Christine Finlayson, state supervisor of home economics education, during the month of February. These meetings were held in Grand Forks, Minot, and Jamestown. The subjects for discussion included the use of the problem method, methods of evaluating and grading home projects, the use of the contract plan, and laboratory factors in teaching home management. Alba Bales, dean of the School of Home Economics, and Francis Bailey, teacher trainer at the Agricultural College, assisted Miss Finlayson with the conferences

State Teachers College, Valley City. Lola Dynes, former head of the department, has resigned to study at the University of Wisconsin, and Eula Underbrink of the Illinois State Normal University has been appointed in her place.

Ethel Forbes of the University of Minnesota is in charge of the teacher training, in the place of Alma DuPuis.

The contract for the remodeling of the Home Economics Building has been let, and the department is being redecorated.

University of North Dakota. There has been so much demand for the course in home economics for men that it is to be offered every year, instead of every other year as heretofore.

The students in institutional management are doing practice work at the Commons under the direction of Grace E. Colton, manager of the Commons, in cooperation with Eva Schairer, head of the department.

OHIO

Ohio Home Economics Association. The second meeting for the year was held at the Florence Harkness Chapel, Western Reserve University, on February 4. The speakers of the day were Margaret Sawyer, educational director of the Postum Cereal Company, and Frances Whitney, secretary of the Consumers League of Cincinnati.

The entire printing of the "Meal Calender" issued by the Association has been sold out, and a second is under consideration. Thanks to the sale of these calendars, Ohio is the third state to have paid its full quota for the Ellen H. Richards Fund.

Cleveland Public Schools. Among boys in the Brownell Junior High School special clubs or classes in practical cooking have been popular for several years, because the boys want to be able to get lunch at home when their mothers are out or because they think

they would like to become professional cooks. In the John Adams School a club of senior boys has gradually grown into a class in which at present twenty boys are meeting for one period daily during one semester and getting one-half hour credit for the course, which is partly a laboratory one. The points they decided to include are personal appearance; the development of personality; etiquette; budgeting; planning, preparing, and serving meals; food selection for health; first aid in the home; and the personal budget. It is too early to tell the relative value of these points, but the class teachers, Eda Caton and Dorothy Jones, are persuaded that there is a place in the curriculum for such an elective course, cultural rather than vocational in purpose.

At Collinswood High School a survey of community habits of life has been made by the home economics teachers which may lead to an amplification of the home economics work. On the basis of information obtained from the families of 457 girls, it is suggested that more child care be taught in the seventh grade; that breadmaking be reinstated; that marketing receive more emphasis; that the teaching of cleaning and laundry work be investigated; that the home economics teacher cooperate with the hygiene teacher and the nurse; that the teaching of clothing, including the use of the sewing machine, be given more attention; that bedmaking come early in the course; and that the use of leisure be discussed in class.

Columbus Public Schools. Anna Bergman, formerly a home economics teacher, is now assisting Ona Prather in the special nutrition work of the elementary schools of Columbus. Miss Bergman is a graduate of Ohio State and spent five years teaching home economics in Korea, where she had classes in foods for boys as well as for girls.

There are now two full-time nutrition workers in the elementary schools assisted by five home economics teachers who give part time to this work.

Ohio Wesleyan University. New members of the staff this year are Grace Neely, who finished a year of study at Teachers College, Columbia University, and Alma Roudebush who comes from Ohio State University.

Two members of the faculty will again teach this coming summer: Miss Titsworth at Amherst Agricultural College and Miss McVey in the clothing department at Teachers College, Columbia University.

The courses for general college students have been so much in demand that the classes have been overcrowded and a waiting list formed. In one new course, "Problems of the consumer" 66 per cent of those registered were men and the one entitled "Household economics" is attracting an increasing number of men.

Otterbein College. The girls who are majoring or minoring in home economics recently organized the Otterbein Home Economics Club which now has a membership of twenty. The work of the club has been quite varied. For the first session the members attended a lecture in Columbus by Ross Crane, an interior decorator, on "Six hundred dollar living rooms." The Christmas program was a display and discussion of Christmas candies and suggestions for gifts and the wrapping of parcels. At the January meeting Miss Lunn, state supervisor of home economics, gave a lecture on "Home economics as a vocation."

Ohio State University. *Extension Service.* Zula Dowler has been appointed temporary extension specialist in home management during the absence of Geneva Bane.

Jeanette Butler, extension clothing specialist, has been granted sick leave until spring and is at her home in Marshall, Indiana. Martha Foster, formerly clothing specialist in Iowa, has been taking her place since February.

Mabel Fernald of Wisconsin began work as county home demonstration agent in Huron County in December, succeeding Nancy Felsom who resigned in October to accept a similar position in California.

Hulda Horst, assistant state club leader, returned to her work in February after a leave of absence for study at Columbia University.

Elizabeth Master, formerly home demonstration agent in New York State, came into

Ohio in February to serve as demonstrator-at-large. She will be temporarily in Summit County during the absence of Edith Childs, who has been granted sick leave.

Amy Parker, formerly in Summit County, began work as demonstration agent in Licking County the first of the year.

Western Reserve University. A group of seniors scheduled for a field course in the household administration department has for the last year and at the request of the Day Nursery Association been making a study of the food served to children in the day nurseries in the city of Cleveland. Ethel Thompson, who is in charge of the work in nutrition, presented a report at the annual meeting of the trustees held during February.

Mary E. Parker, head of the department, represents home economics in the Vocational Guidance Conference conducted by the Young Women's Christian Association and high schools of the city.

Under the direction of Marie L. Hines the department has opened a lunch room for the use of the faculty members.

Victoria Kloss, an instructor in the department, has returned to her post after six months' absence.

OKLAHOMA

Oklahoma Home Economics Association. The state meeting was held in Oklahoma City February 9 and 10. At the dinner on February 9, Emeline S. Whitcomb of the United States Bureau of Education and Cornelia Adair, president of the National Education Association, were special guests. Miss Whitcomb also addressed the home economics sections and the general session of the state Oklahoma Educational Association.

The Xi and Psi Chapters of Omicron Nu were hostesses at a tea to home economics guests.

The College Teachers Section has affiliated with the American Vocational Association. The president of the Section is Kate S. North of Oklahoma City and the secretary-treasurer, Hedwig Schaeffer Edmonds.

The Homemakers Committee reported an enrollment of 75 members. This committee is cooperating with the home economics committee of the state Parent-Teacher Association and is sponsoring a child study class among its members in Oklahoma City.

Oklahoma Agricultural and Mechanical College. A short course in electrical equipment was given February 27 to March 3, in cooperation with the southwestern branch of the National Electrical Association. It included lectures and demonstrations by representatives of public utilities companies and faculty members.

A new course in child nutriton is being offered in which the laboratory work includes the preparation of lunch for the nursery school children.

Miriam Birdseye, nutrition specialist of the U. S. Department of Agriculture, during October gave a demonstration on "Recognizing the well nourished child" for students in field nutrition and mothers of nursery school children.

A conference of the Extension Division was held at the college December 14 to 17.

Grace Steininger of the household science department spoke on "Teaching nutrition in the schools" at the North Central Teachers Association meeting at Enid. Julia Robertson of the home economics eduation department addressed the same meeting.

Oklahoma College for Women. There is special interest in the Home Economics Club this year. Active membership is limited to students who have had at least ten hours of home economics. The club has given a tea for the new members, and a number of pictures have been taken for the kodak section of the college annual.

Under the direction of Ruth Baker, the class in home planning is drawing floor plans for the proposed new home management house.

Students in applied design made very attractive Christmas cards which were sold to raise funds for new materials for the art department.

Helen S. McVeigh has been appointed to the staff of the art department in place of Madeline Ritz, who is on leave of absence to study at Teachers College, Columbia University.

Julia McIntyre, formerly at State Teachers College, Harrisburg, Virginia, is assistant

professor of foods and household management. Students entertained the State Artists Association November 19 at one of a series of luncheons and teas.

Tulsa Home Economics Club. The second regular meeting of the year was held at the College Club on Saturday, December 3, 1927, in commemoration of the birthday of Mrs. Ellen H. Richards. Following a luncheon a program was given which consisted of "An appreciation of Ellen H. Richards," by Maude M. Firth, director of home economics education in Tulsa; "Education for parenthood," by Mrs. Eileen M. Harrison, director of mothercraft education; and "Problems in home economics education," by Mrs. Myrtle Gleason Cole, dean of women, Tulsa University.

The Tulsa Home Economics Club is a new organization whose aim is to foster the spirit and broaden the vision of home economics education in Tulsa and vicinity, and to promote a feeling of fellowship among its members. The constitution provides for two types of memberships; active members are those who are actively engaged in home economics education; associate members are those interested in home economics education but active in fields related to home economics. Associate members may include health workers, school nurses, homemakers, social service workers, institutional managers, or those engaged in related commercial lines. The officers of the club are president, Alice Neiman; vice-president, Mildred Turner; secretary-treasurer, Mildred Schweider.

Several teachers from the northeastern district of the Oklahoma Education Association and also several leaders of the Council of Mothercraft were present at the meeting.

OREGON

Oregon Home Economics Association. The midyear meeting in Portland was largely attended by teachers, homemakers, and others interested in home economics. There was an interesting general session at which Mary S. Lyle, state supervisor of Wyoming, gave a report of the American Vocational Association meeting at Los Angeles; Dean Ava B. Milam, Oregon State College, told of the American Home Economics Association meeting at Asheville; Anne Simpson of the Marion County Health Demonstration spoke on "Contributions of nutrition to the health education program;" and Mrs. Beth Baily McLean spoke on "A homemaker's suggestion to home economics teachers." This last talk contained so many valuable suggestions that it has been printed in the *Teachers Exchange*, published by the School of Vocational Education of the College.

Following the general meeting, two well-attended and profitable round table conferences were held, one on problems in teaching home economics presided over by Florence Blazier of Oregon State College, and the other on problems in child care under the direction of Mrs. Sara W. Prentiss, head of the nursery school at Oregon State College.

State Nutrition Council. The winter meeting was held in Portland at a dinner when reports were given of three projects sponsored by the council and described in the JOURNAL for August, 1927; and Dr. William D. De Klein, who was called to the Mississippi flood region to make a study of conditions there and who is now directing the Marion County Health Demonstration, gave a talk on "Prevention of pellagra in the Mississippi flood region;" and Beatrice Geiger, assistant professor of food and nutrition at Oregon State College, spoke on "Some of the newer aspects of nutrition."

Marion County Health Demonstration. Anne Simpson of the organization arranged a very successful day's meeting for the home economics teachers of Marion county, at which there was a perfect attendance. The subjects and speaker were "A course in nutrition for the high school," Mrs. Jessamine Chapman Williams, "Newer aspects of nutrition," Beatrice Geiger, and "The place of nutrition in the general health program," Florence Blazier, all three speakers being members of the faculty at Oregon State College.

Oregon State College. The fifth annual Educational Exposition was held February 17 and 18 with six hundred delegates from the high schools of the state in attendance.

This year the home economics exhibits centered around the theme of a bulletin, "Woman's Career", recently published by the School of Home Economics. This bulletin is an attempt at giving vocational guidance by presenting letters from graduates telling of their accomplishments in their chosen fields. The six types of workers represented in the bulletin are the homemaker, the interior decorator and designer, the tea room manager or dietitian, the teacher, the extension worker, and the journalist.

The Campus Nutrition Council, formed among members of the resident faculty and extension service for the purpose of correlating the programs on nutrition with sound agricultural practices in food production, has published a report of a study of the food consumption of 563 Oregon families. The study does not attempt to express results in terms of energy, protein, and minerals, but shows the frequency with which certain types of foods appear in the diet. The report may be obtained through the Extension Service of Oregon State College.

The annual home economics field trip will this year give the students of junior and senior standing an opportunity to visit the outstanding industrial plants of Portland which have some "tie up" with home economics.

Maud Wilson, home economics worker in Purnell research, is on leave during the present half year, to do graduate work at the University of Chicago.

Caroline Ching, a graduate at Yenching College majoring in home economics, who has been studying at Columbia University for the last two and a half years, has registered in the College for the second half of the year and for summer school, giving much time to the study of household management. At the close of the summer she will return to China to be under Camilla Mills on the staff of Yenching College.

Hanna Kim completes the requirements for her master's degree at the end of the second term of the present year. She returns to Ewha College, Seoul, Korea, where she will teach home economics. Miss Kim has attended Oregon State College for three and a half years as a McDowell scholarship student. She received her bachelor's degree in June, 1927.

PENNSYLVANIA

Pennsylvania Home Economics Association. The Association through its special Ellen H. Richards Fellowship Committee during November sent two thousand circulars to teachers and other home economics workers in the state.

Pittsburgh Public School. An urgent request was made to observe Mrs. Richards' birthday in December, so that a large number of girls and boys might know something of the contribution made by this great teacher. The South Side Junior and Senior High School used the general activity period of December 2 for thus honoring Mrs. Richards. Short papers by several students sketched the different types of service which Mrs. Richards had rendered. The home economics teachers and other members of the school faculty were present, also the director of home economics in the city public schools and the home economics district supervisor. Light refreshments were served. A large cake, made by the girls of the department and bright with the many small burning candles, gave evidence that it was a real birthday celebration.

The program followed by the food classes in the Taylor Allderdice Junior High School, has emphasized the relation of home economics to health, giving careful recognition to the fact that no other health factor is more important than an intelligent use of an adequate daily diet. Irene McDermott, who has charge of these classes, directed a careful observation of the results of the different types of diet on white rats. The interest in this experiment was not confined to the classrooms; smaller boys and girls were advised by older sisters concerning the results of this experiment so that their milk took on a more desirable flavor, and coffee and other undesirable beverages for children were automatically discarded by those who aspired for greater physical prowess.

PORTO RICO

University of Porto Rico. Two department bulletins were issued by the home economics department during the first semester: "Clothing the Baby in the Tropics" by Marie Vestal and "Tropical Foods, Bulletin No. 3, Rice and the Legumes" by Elsie Mae Willsey.

The home economics enrollment for the first semester was the largest on record. Including college, collegiate, and subcollegiate rural teachers, University High School, University Elementary School, and "specials," it totaled 308.

Elsie Mae Willsey, who represented the University at the fifth Pan-American Child Congress at Havana in December, was the speaker of the day at the Women's Faculty Luncheon in January. Miss Willsey told of the splendid opportunities open to University of Porto Rico graduates in Latin-America, as well as the lines along which women faculty members may serve. She strongly advised those present to make it a point to familiarize themselves with the educational procedure on the adjoining islands.

Luisa Hansen, '27, who is a Latin-American educational director for the Singer Sewing Machine Company, spent a day at the University recently. Miss Hansen had just returned from two months work in Santo Domingo and is sailing soon for a like period in Venezuela.

Mrs. Rita Lang, '27, is doing notable work as nutrition expert with the American Red Cross. Since graduation, Mrs. Lang has completed her resident work in dietetics at the Presbyterian Hospital and has taken ten credits in nutrition and dietetics at the School of Tropical Medicine. Mrs Lang is working with the children in the "Comedor Escolar" (school lunch room) at the Rafael Cordero School, San Juan. Her conferences with the mothers and their cooperation in the breakfast and dinner feeding are bringing splendid results. Mrs. Lang tells of a fifteen-year-old boy who asked her to tell him how to build himself up so he could make the athletic team.

TEXAS

South Texas State Teachers College, Kingsville. On January 15 Falba Foote of the West Texas State Teachers College came to Kingsville to install a chapter of the Kappa Omicron Phi sorority. Using the beautiful and impressive ceremony of the organization, nine members were initiated into the chapter.

The trunkfuls of historic costumes and tapestries loaned by Cheney Brothers have added greatly to the interest of students. The dresses were worn in a pageant of historic costumes. The tapestries excited much attention as they were hung in the "Little Gallery" where all of the school were privileged to enjoy them.

Leloise Davis is in Europe where she is to spend about a year in study and travel.

West Texas State Teachers College, Canyon. The Home Economics Club was represented at the annual meeting of the Texas Home Economics Association in November at Houston by the president, Ruth Bloodworth. The club is now planning to double the amount of the scholarship fund established last year, which is available to worthy upper classmen majoring in home economics.

Zeta Chapter of Kappa Omicron Phi, although new, has accomplished much. Freshmen and sophomore records indicate that the organization is acting as an incentive in raising the scholastic standing of girls majoring in home economics. Zeta chapter was represented at the Kappa Omicron Phi Conclave in Warrensburg, Missouri, by two delegates, Gladys Sweazea and Ferne Bowman, president and secretary of the chapter.

Texas Technological College, Lubbock. The home management house was formally opened on January 30, when many students, members of the faculty, and citizens of Lubbock embraced the opportunity to see the house and learn its workings.

The annual sale for the benefit of the Home Economics Loan Fund was participated in by all departments of the School of Home Economics and added $117 to the Fund.

A SPANISH CAKE
made by the quick
"BATTER METHOD"

1. Collect all dry ingredients with necessary utensils for measuring and mixing.

2. Then bring out the liquid ingredients with additional utensils needed.

3. Put sifter into mixing bowl and measure into sifter 1¾ cups sifted flour, 1 cup sugar, 3 teaspoons Royal Baking Powder, 1 teaspoon cinnamon, ¼ teaspoon salt and sift together into bowl.

4. Measure ½ cup butter or other shortening and liquefy by heating over hot water—do not cook. Separate 2 eggs; first beat the whites until stiff and then, without washing the beater, beat the yolks.

THE batter method of cake mixing illustrated here is quicker and easier than the standard "Creaming Method" and with simple recipes like that for this Spanish cake, or a cake intended for cottage pudding, the results are quite satisfactory. The batter method is not recommended, however, for the more elaborate, richer type of cakes.

* *

In all cake making, no matter what the method, the quality of your baking powder is of the utmost importance.

Royal, the Cream of Tartar Baking Powder, is preferred by food experts the world over. In Royal are perfectly blended soda and pure cream of tartar.

For more than three generations Royal Baking Powder has kept to an absolute standard of uniformity. With it you can use the same recipe year after year and your baking powder will give you identically the same results. It always leavens perfectly. And it gives to all foods a sweet appetizing flavor.

Contains no alum; leaves no bitter taste.

5. Add to ½ cup milk the liquefied shortening and mix these well with beaten egg yolks.

6. Pour the liquid into the dry ingredients and beat well for about 2 minutes, using an "up and over and under" motion. Keep the batter light and fluffy. Add the egg whites—"cut and fold" them in lightly. Mix well without beating.

7. Put into loaf pan, which has been greased and dusted lightly with flour and bake in moderate oven at 350° F. for about 35 minutes.

8. Turn out of pan on to cake cooler over which clean cloth has been placed. When cool turn right side up and sprinkle with powdered sugar or spread with chocolate or white icing.

The completion of the Agricultural Building has made possible the expansion of the School of Home Economics. The lower floor of the home economics building, which was formerly occupied by the School of Agriculture, is now converted into new laboratories for the foods and nutrition and the clothing and design departments.

A district conference of home economics teachers was held at Lubbock recently, during which the teachers were the guests of the College.

An extension class in child care in a nearby town is conducted each Saturday by a member of the home economics faculty. The class is composed of both men and women.

University of Texas. The textile and clothing division has installed a new Scott tester for yarns and fabrics, which will be used by the students in the advanced textile class for both class work and commercial testing.

UTAH

Utah Home Economics Association. Present indications are that the Utah quota for the Ellen H. Richards Fund will be met before the time is up. Affiliated high school clubs have responded enthusiastically. The Nu Delta Sigma at the University of Utah and the Home Economics Club at the Utah Agricultural College have contributed generously.

At a recent meeting of the executive committee, the editing of the Utah News Letter was part of the regular business. The suggestions were made that at the next regular meeting of the Association the constitution be amended to allow for an editor to be elected as one of the regular officers.

University of Utah. Two short intensive courses in food preparation and technique of clothing have been recently organized.

Alida Frances Pattie was a recent visitor on the campus.

WASHINGTON

University of Washington. Blanche Payne has succeeded Mrs. Virginia Cunningham Patty as assistant professor and is giving courses in clothing, costume design, millinery, and history of costume. Mrs. Patty was married in June to Mr. R. C. Meysenberg of Houston, Texas.

Grace G. Denny returned in October from six months travel in Europe where she made a special study of famous textile collections in museums, such as the Bargello in Florence, the Cluny Museum in Paris, the Textile Museum of Lyons, and the South Kensington Museum in London. Miss Denny also visited embroidery schools in Italy and made a collection of samples of the work done in different sections of that country. She also brought back many fragments of 14th, 15th, and 16th Century brocades, damasks, velvets, laces, and embroideries, for the permanent collection of the University.

Bernice Wait is assistant professor of nutrition in the absence of Jennie I. Rowntree, who is on leave to study at the University of Iowa on a Laura Spellman Rockefeller Memorial Fellowship.

Elizabeth A. Rivers is assistant professor in the absence of Addie Jeanette Bliss, who is spending the year in special nutrition work at Teachers College and the Presbyterian Hospital, New York.

Two graduate students who are part time instructors in the food courses are Martha Davis, recently dietitian at Scripps Metabolic Institute, La Jolla, California, and Mildred McIntosh, formerly dietitian at Hollywood Sanitarium, California.

Alta Atkinson and Lenore Sullivan, graduates of the Montana State College, are assistants in the Commons.

Jessie O'Keefe, '29, holds the nutrition fellowship this year.

The Bon Marché fellowship for 1927–28 was originally awarded to Evelyn Anderson, but because of her illness, Lillian Imrie of Oregon Agricultural College was appointed in her stead.

College of Puget Sound, Takoma. Blanche Stevens, formerly of the Oregon Agricultural College, is head of the home economics department.

State College of Washington. Helen Robson, assistant professor in textiles and

clothing, has leave of absence for this semester and is to study at Columbia University through the spring.

Myrtle Hyre, a graduate of the University of Kansas, will take Miss Robson's place during her absence. Miss Hyre has taught at Denton, Texas and East Radford, Virginia.

Florence Fallgatter, field agent of the Federal Board for Vocational Education, visited the campus in January.

WEST VIRGINIA

Vocational Conference. There was a perfect attendance of teachers of home economics in vocational schools at the sixth annual conference held at West Virginia University There was also a good representation of teachers in non-vocational schools and twenty-five home economics seniors from the University.

Every year the question of holding the vocational conference in some other part of the state arises, but each time the decision has been reached to hold it at the University, the advantages being that the majority of the vocational teachers are graduates of the University, who, by coming back to the institution once a year, are able to keep in touch with new developments, that the conference is a stimulus to the senior students who are planning to teach, and that expert help is easily obtained when the conference is held at the University.

Farmers' Week. One hundred and seventy-five women attended the annual Farmers' Week held at the University January 9 to 13. Most of them were delegates from farm women's clubs and attended the classes which would help them to carry out the program of work in their home communities. Classes taught by members of the home economics staff were: Foods, Eva Mae Davis; clothing, Ruth Noer; home management, Nell Nesbitt and Helen Sterrett; home furnishings, Beth M. Palmer; the home management house was used as a setting for the last two. Lunch was served daily in the building where the classes were held by the girls of the Home Economics Club.

Dr. Mary Swartz Rose was present two afternoons to discuss child feeding problems. One afternoon Hazel Cameron, research specialist, gave a demonstration in making Mountain State blackberry jam, and members of a clothing class put on a style show. The other afternoon programs were devoted to county and committee reports of the State Farm Women's Bureau. The Campus Club gave a tea in honor of the farm women, and the freshman girls were hostesses to the visitors at Woman's Hall Open House.

WYOMING

University of Wyoming. The annual state extension service conference was held at Laramie January 9–14. All the county home demonstration agents were present to discuss extension methods. Bernice Forrest, clothing specialist, demonstrated new illustrative material on footwear, and Evangeline Jennings outlined the material for a new project on "The outward manifestations of child health."

Margaret Sears was initiated into Phi Upsilon Omicron in January.

At the February meeting of the Home Economics Club, Mary S. Lyle, state supervisor for home economics education, gave a talk on "Opportunities for home economics trained women." The Club is trying to raise money to send a representative to the American Home Economics Association meeting in Des Moines next June.

A system of scoring has been worked out whereby each girl must earn five points in some special activity to be entitled to own a Home Economics Club pin. At an early meeting the members will engage in a contest on "Who's Who in Home Economics," and the two scoring highest will each earn one point.